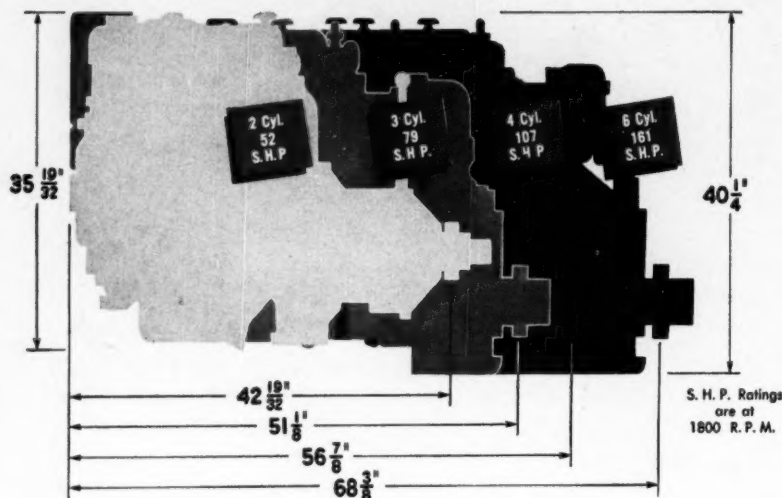


PACIFIC MOTOR BOAT



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SOME people still think of a Diesel as a big, bulky, slow-turning engine that's hard to start. But not all Diesels are like that now.

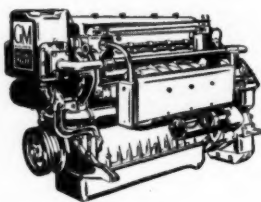
Today General Motors Series 71 Marine Diesels—in 2-, 3-, 4- and 6-cylinder singles, "Twins" and "Quads"—are replacing gasoline engines in all sizes of craft—because experience proves they are far more dependable, economical and safe. They are replacing other Diesels too because of their compactness and lighter weight.

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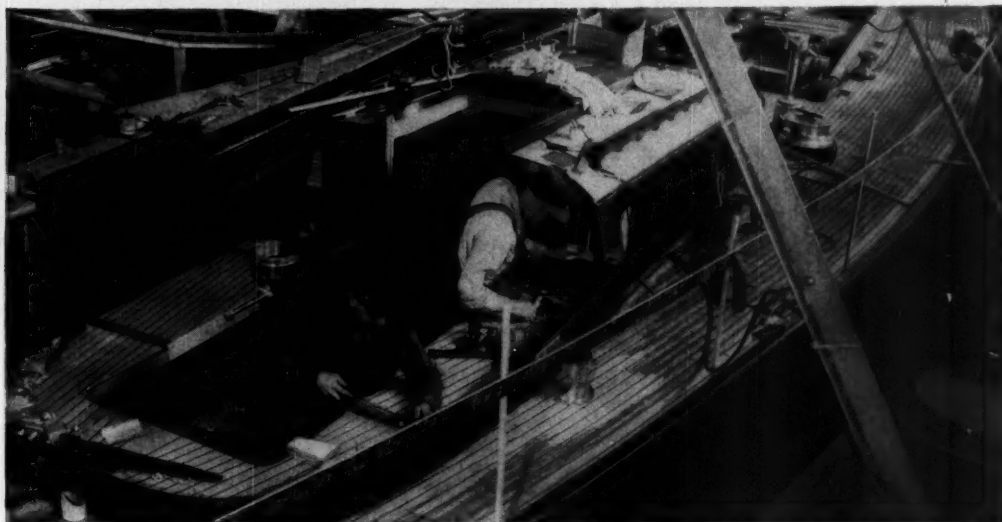
Evans Engine & Equipment Co., Inc.
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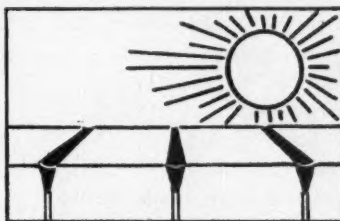


PORT ORFORD CEDAR DECKS of 73½-foot yawl *Bolero* caulked with permanent, rubberized "3M Line" Deck Seam Sealer. *Bolero* was launched in June, '49.

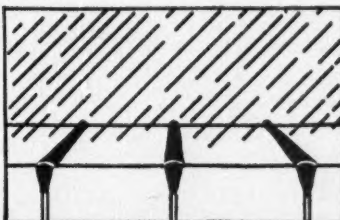
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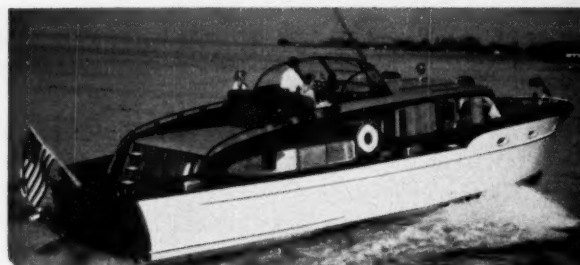
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Or cruising the limitless waterways of the world in luxurious splendor
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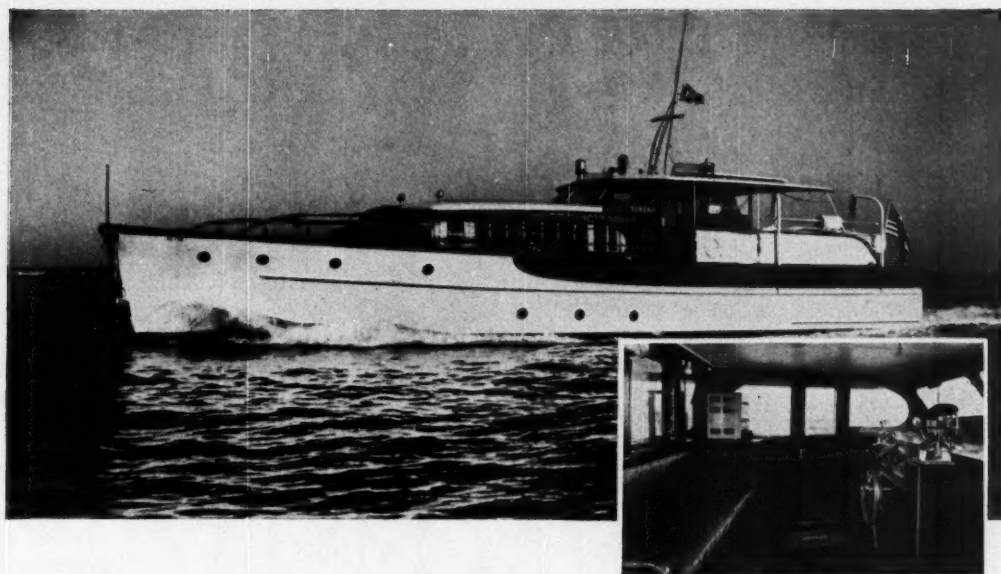
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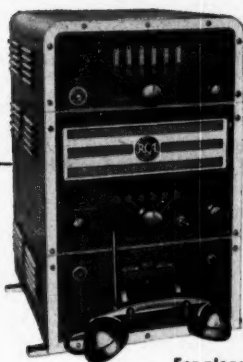
San Pedro
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Aboard the **SERENO** you'll see a **RADIOMARINE** Radiotelephone

The 70-foot, twin diesel yacht **SERENO** owned by L. M. MILLER of Wichita, Kansas and Miami beach, Florida, was built by the Burger Boat Company, Manitowoc, Wisconsin. Aboard the "Seren" you'll see a Radiomarine Radiotelephone, Model ET-8037, installed in the pilothouse.

Here is another typical example of



RADIOMARINE Model ET-8037

30 watts, 6 crystal-controlled channels.
Operates from either 12, 32, 115 volts d-c or
115 volts a-c power supply.

For pleasure craft, sport fishermen, sport cruisers,
trawlers, tugs and small coastwise vessels.

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The same precision engineering that is built into Radiomarine radar, loran, direction finder, radio-telegraph and radiotelephone equipment for America's merchant ships also goes into equipment built by Radiomarine for pleasure craft. Dependable performance, simplicity of operation put Radiomarine out in front. You'll find Radiomarine the first choice of owners and builders of all types of vessels from luxury liners to pleasure boats.

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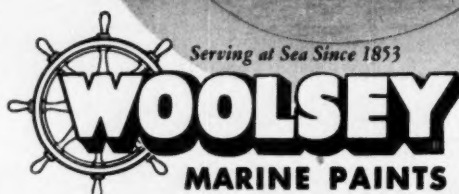
For Smooth Performance
WOOLSEY PAINTS
ARE FIRST CHOICE...

VINELAST ANTI-FOULING RACING FINISH
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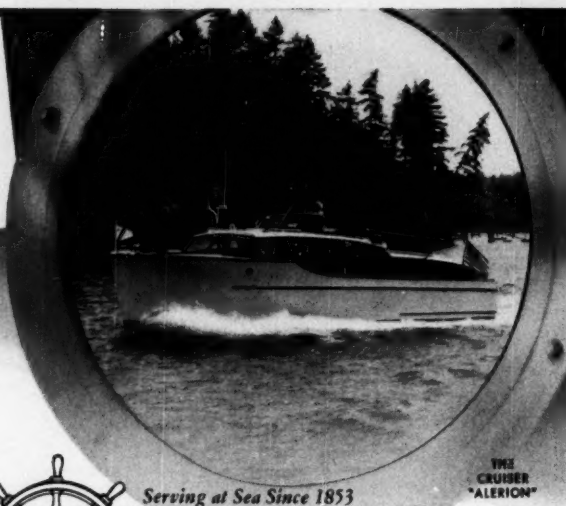
Sleek, smooth and highly resistant to fouling, Woolsey Vinelast Anti-fouling Racing Finish actually adds speed to boat bottoms.

Edwin Monk, noted Naval Architect of Seattle, Washington, and owner of the Alerion says: "Last Spring I repainted the bottom of my cruiser 'Alerion' with Vinelast. There was a resultant increase of 25 motor revolutions over the maximum attained when the boat was new and light on her original trials a year previous. I personally think that most of the improvement can be credited to the smoother bottom paint."

This story of improved performance is typical of reports on record from thousands of owners of Woolsey-painted boats. With nearly a century of experience in making fine marine paints, Woolsey can be depended upon for products that are specially engineered to do their special jobs better. C. A. Woolsey Paint & Color Co. Inc. 229 E. 42nd St., N.Y., U.S.A.



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Model 17M, 2-cylinder 13 hp. inboard with reverse gear, clutch assembly.

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Watch these Wisconsin Heavy-Duty Air-Cooled Inboards thrive on rough treatment in your power boats and dinghys and on other power tasks! . . . providing long-term service at rock-bottom upkeep!

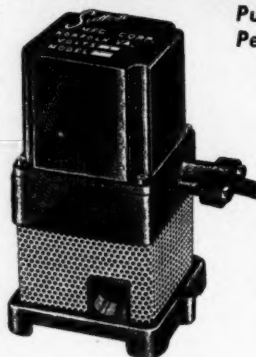
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**ONLY 7 1/2" HIGH. FITS ANY
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Operates on 40 watts. Does not have to be fastened down — will not tip over. VAPOR PROOF—will not cause explosion under most hazardous condition. All bronze construction with heavy gauge screen surface—mechanically simplified for trouble-free operation. Complete with 5 ft. oil-proof, grease-proof neoprene-covered electric cable

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Power tailored to your needs. Choice of eight reduction gear ratios including integral "Vee Drive"	YES	
Low Cost Hydraulic Control	YES	
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Water Pump with rubber coated independently driven gears	YES	
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Choice of solid or rubber mounting	YES	

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Storage Battery included without extra charge	YES	
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Opposite Rotation Engines supplied without extra charge	YES	

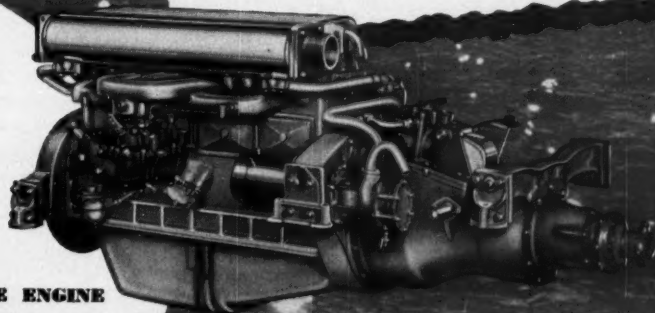
*Except on Aco Model

Make an engine for engine comparison. You'll find that for quality, for engineering, for dependability, for economy, for performance, for quick service, Chrysler Marine Engines have no equal. See your dealer or write for literature telling us the type of boat you own. Marine Engine Division, Chrysler Corporation, Detroit 31, Michigan

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AMERICA'S NO. 1 MARINE ENGINE

Parts and Service quickly available everywhere.



Good Conduct Code Should be Requirement Of Membership in all Yacht Clubs

CARELESSNESS and ignorance caused some of the most spectacular small boat accidents which marred the 1950 boating season. Fish boats have sailed from port, their crews never to return alive. Cruisers have exploded and burned. Overloaded rowboats on resort lakes have turned Sunday outings into tragedies.

Monday morning headlines have detailed the grisley adventures of unfortunate boatmen: "Boy Drowns; 2 Die Attempting Rescue"; "Man Sailing Alone Feared Lost"; "\$60,000 Asked In Boat Mishap"; "Hand Severed by Motorboat"; "Fumes Ignite, Cruiser Burns"; "Yacht Owner 'Too Sick' To Talk About Fire"; "Pleasure Boat Charred by Fire at Yacht Docks"; "Portland Boat Explodes Off Tongue Point."

Sadder still, some of these accidents happened to master mariners, seasoned skippers who have spent all their lives at sea.

Because boat operation is not basically hazardous, there are no "speedcops" at sea, no highway lanes, no rigid inspections for licensing of privately operated craft. For years the yachtsmen and small boat operators have been self-disciplined with a code of conduct that spelled out their own safety and precluded any rigid policing of the waterways.

The vast increase in boating has brought about a lowering of standards that have always been traditional among yachtsmen. The yelling hoodlums who speed along waterfronts, creating a high and violent wash that damages moored craft and waterfront installations, are becoming a common menace.

The good work which is being done by the Coast Guard and the Coast Guard Auxiliary in the courtesy inspection program is a good step in the right direction. It is not enough. Needed is the cooperation of all organized boating groups. Yacht clubs, for example, could vigorously promote safety measures. The right to fly a club pennant should be denied to irresponsible individuals who do not follow the yacht club's code of conduct.

The average boat owner is really anxious to learn what he must do in order to safely operate his boat. No skipper wants himself and his family to become the leading characters in a funeral pyre at sea.

Consequently safety at sea can result from basic education in boat operation. This information is readily available from a number of sources.

First, the boat owner can easily find out what the legal minimum equipment requirements are for pleasure and commercial motorboats, as well as recommended types of installations.

Second, a thorough knowledge of the rules of the road are an essential requirement for safe boat operation.

Third is a thorough grounding in seamanship and navigation. There are many books on this subject, and the Coast Guard Auxiliary and U. S. Power Squadrons hold classes on these subjects.

A code of conduct, long a tradition among yachtsmen, should be revived and brought up to date. This could be done with the aid of the yacht clubs who are just as anxious as anyone else to see that yachting remains a gentlemen's sport.

Move to Cancel Gas Tax Refund

It now appears that it is more than a rumor that the Washington state tax commission will ask the legislature to amend the refund law so that boat gas will be taxable the same as that used in cars. Such a move is expected to be the first step in taking away the refunds from all non-highway users of gasoline.

Fortunately the Puget Sound Interclub Association was formed September 17 for fighting just such battles on the behalf of boatmen. President of the new organization is the commodore of the Olympia Yacht Club, Lyle Iversen.

The association will present a united front on the behalf of Puget

Sound yacht clubs in all such matters and may prove to be a good idea in these days when the only way to confront a massive pressure group is to construct one of your own.

There are many problems which the organization will find on its agenda in the coming months and years. As waterfront grows more valuable along the Pacific Coast, powerful interests will move against each other for exclusive use of certain waterfronts and waterways.

Earlier this year the residents of Hood Canal lost a fight against the use of a recreational area for a naval bombing range. They had to fight their battles alone, and were, like all small groups who fight alone, destroyed piecemeal.

In time it may come to pass that the boating interests of the entire Pacific Coast may sit in grand council and move together in concert to protect the interests of the small boat owner everywhere.

Congress OKs News of Fishing Derbies in P. O. Ruling Upset

News and results of fishing derbies is again public information as a result of a bill recently passed by Congress specifically exempting non-profit fishing contests conducted by recognized organizations from classifications as lotteries. Earlier this year the Post Office department ruled fishing contests and derbies were lotteries and as such all information about them would be barred from the mails.

Our 38th Work Boat Issue

On the following pages will be found the most comprehensive reviews of towboating on the Pacific Coast ever prepared by this magazine.

Members of the staff of *Pacific Motor Boat* actually counted the number of commercial tugs in the Pacific area. There are 1100 of them, 100 more than there were a year ago, more than anyone expected. More than one million dollars was spent for new tugs on the Pacific Coast during the past year.

When the editors analyzed the work that these tow boats do, it was found that most of the basic industries located on the waterfront are almost dependent upon tugs. The statistics show tremendous tonnages hauled annually on Western waterways. Only the tug boat men themselves can tell us of the humor, the drama, and the tragedies that accompany their routine work.

Coming Events On the Pacific Coast

Nov. 4, 5—Fall Gold Cup Series, Newport Harbor Y. C.
Nov. 11—Armistice Day 14-Mile Bank Race, N. O. S. A.
Nov. 11, 12—Predicted Log Race to Quilcone Bay, Seattle Y. C.
Nov. 11, 12—Armistice Invitational, all classes, Balboa Y. C.
Nov. 11-13—A. P. B. A. annual meeting, Las Vegas.
Nov. 18, 19—Stag cruise, Columbia River Yacht Club.
Nov. 19—Fall Point Fermin Race, C. B. Y. C.
Nov. 25-26—Thanksgiving Lighting Regatta, San Diego Bay, Corinthian Y. C.
Jan. 12-20—New York Boat Show, New York City.
Mar. 2-11—San Francisco Sports, Travel and Boat Show.
Mar. 31-Apr. 8—Seattle Boat Show, University of Wash. Pavilion.

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No. 12



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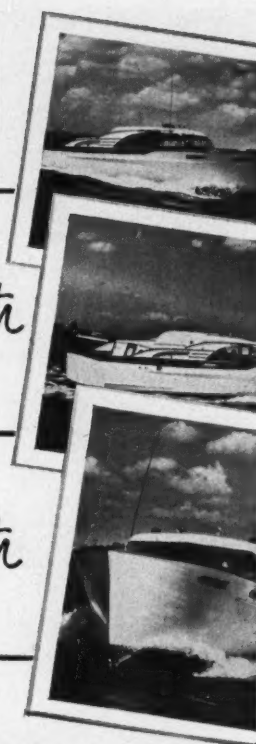
THE COVER—Out for Another Tow

Red Stack's sea going tug Sea Lark heads for San Francisco's Golden Gate and another tow, with Yerba Buena Island and the Bay Bridge in the background. Sea Lark, 126 feet long, was built in 1943 by Hodgson, Greene & Haldeman, Long Beach, and is powered with a 1200-hp Enterprise diesel engine.—Wesley Swadley photo.

Month

After Month

After Month



DULUX YACHT WHITE Stays Brilliant White!

Skippers know the real test of a yacht white comes at season-end. And, from experience, they've learned that DULUX Yacht White passes the test with flying colors. Months after it goes into the water, DULUX Yacht White is still a brilliant white—despite sun, salt spray, oil and harbor gases.

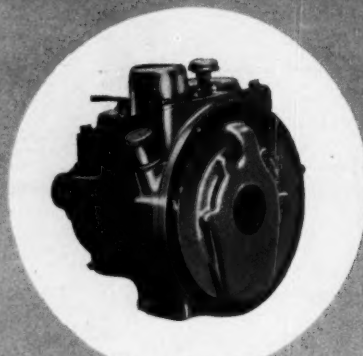
Yes, DULUX Yacht White is the smart-looking White... for every type of boat afloat. And DULUX is rugged... stands up under hard knocks, resists chipping and cracking... protects your boat from water-line to masthead.



DULUX Yacht White is available in Gloss, Semi-Gloss or Flat... and there are 12 smart DULUX colors to choose from. See your DULUX Marine dealer today. E. I. du Pont de Nemours & Co. (Inc.), Finishes Div., Wilmington 98, Delaware.



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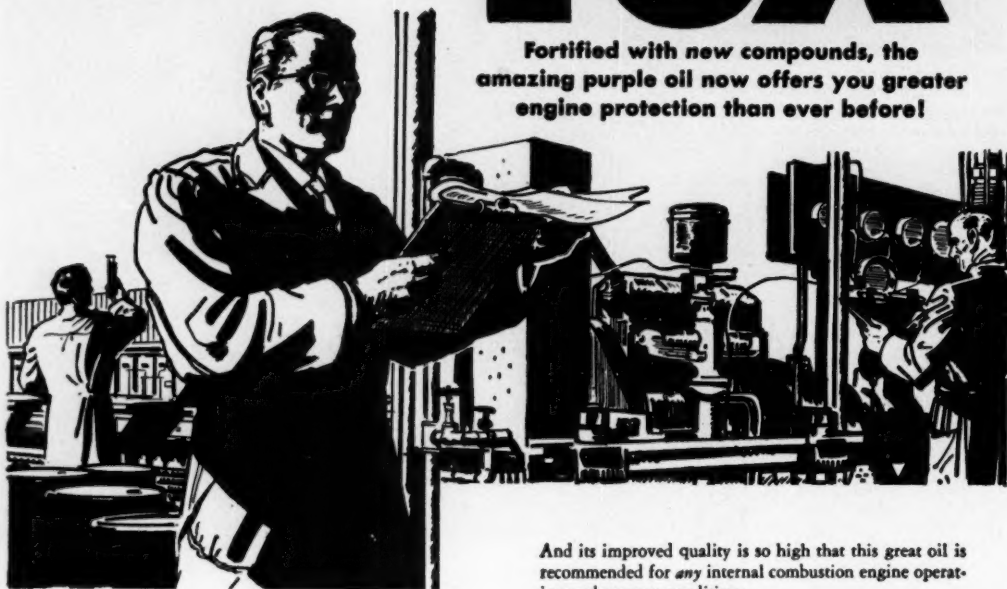
long periods of fishing under trying conditions in all weather. Sperry equipment provides Captain Dore and his crew with a "triple" steering system—automatic, electric follow-up and manual—for handling in all types of sea. This means faster and safer trips to and from fishing grounds . . . more profit per trip.

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The Chris-Craft runs Lava Falls, one of the most difficult of the major rapids in the Canyon series. Passengers are Taylor, Desloge, with Marston at the wheel.—William Belknap, Jr., photo.

Swift Flows the Colorado River

Here is the true story of the wreck of the helicopter and the *Esmeralda II* and the successful voyage of a Chris-Craft between mile-high canyon walls

AGAIN has the mighty Colorado River, turbulent, muddy and wild, cutting through the Grand Canyon, the most awesome in the world, been conquered by a power boat.

For the first time in history the 289-mile run from Lee's Ferry, through Marble Canyon, through the Grand Canyon, and on to Boulder City, was made by a stock motor boat—a 19-foot Chris-Craft racing runabout, purchased through the John G. Rapp Company, San Francisco, distributors, and powered with a 158-hp Chris-Craft motor, turning a Federal propeller on a Monel Metal shaft, through a Goodrich cutless bearing.

It was essentially the same group of adventurous northern California white water men who made the first power boat traverse of the Canyon in 1949, as described in the September, 1949 issue of *Pacific Motor Boat*, that made the first stock motor boat run in June, 1950.

This was the twenty-second time that man has successfully completed such a voyage and makes a total of

less than 125 persons who have made this trip.

It will be recalled that last year the party was led by Edward Hudson, a pharmacist of Paso Robles, and consisted of Otis Marston, Berkeley, who has shot the thundering rapids of the Grand Canyon several times in skiffs; Bestor Rob-

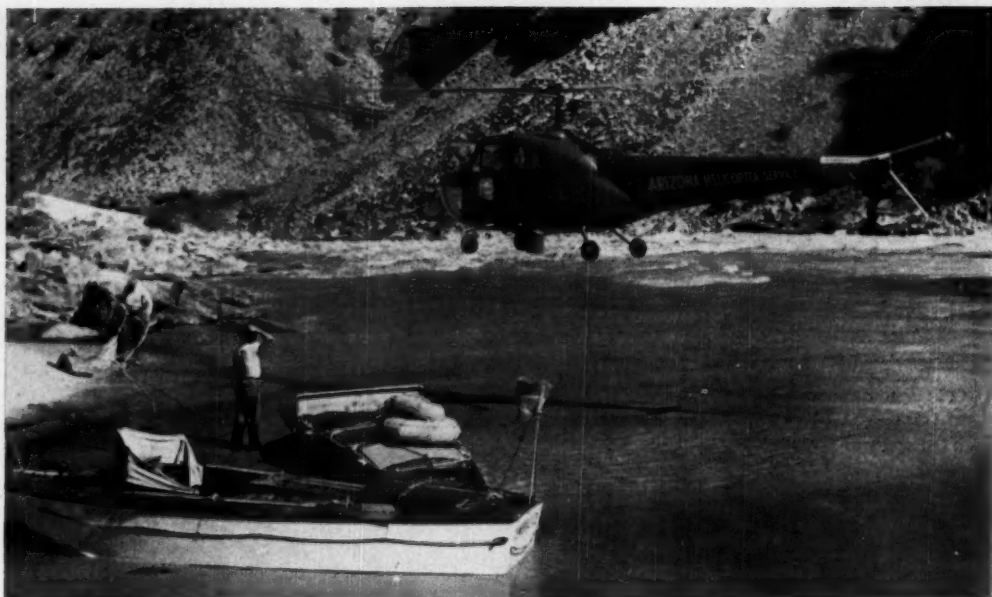
inson, Oakland, noted mountain climber; Edward Hudson, Jr., and Willie Taylor, also of Berkeley.

The expedition left Lee's Ferry, and five days later arrived at Pierce's Ferry—the fastest time man has ever traversed the gorge—279 miles from the starting point.

The Colorado River is one of the



Route of the Hudson and Marston expedition, which started at Lee's Ferry and ended at Pierce's Ferry.



The helicopter comes in from the right at the head of Hance Rapid, one of the heaviest pieces of water in the course. The *Esmeralda* is in the foreground with the *Chris-Craft* immediately behind it. Two air force one-man rafts are tied to the after deck of the *Chris-Craft* for emergency use.—William Belknap, Jr., photo.

largest on the North American Continent, rising in the Rocky Mountains in Colorado, and discharging into the Gulf of California. The greatest canyon in the world has been cut by the river in the high plateau region of southern Utah and northern Arizona. In its largest development it is a mile deep and 8 to 13 miles wide.

Behind this latest exploit of Hudson and his comrades lie many months, even years of planning, but to hear Marston, an experienced white water man, it was just another pleasant jaunt.

The purpose of the 1950 expedition was two-fold—exploration, and Marston wanted to prove that river running can be reduced to an art with a minimum of hazards by the development of the proper technique plus proper supply and equipment. He foresees the day when properly outfitted and conducted tours via water will be made of the Grand Canyon, carrying adventure-some tourists.

Last year the mountain climber, Bestor Robinson, was placed in charge of the commissary and safety precautions. There are 20 miles of the gorge where it would be impossible for men to get out should their boat be disabled, but otherwise planning took into consideration an escape route up the side of the gorge approximately every five

miles. It would have been Robinson's function to climb out and get help or assist the other members of the party out, should the boat become disabled.

This time, rather than counting on climbing out of the Canyon should accident strike, it was planned to take two boats for safety—and that's how the *Chris-Craft* entered the picture.

Marston and Hudson figured that a 19- or 25-foot *Chris-Craft* would be exactly right for the job. Marston made a study of the hull and operating characteristics of the *Chris-Craft* and decided that that boat would be the best for rough water. He and his associates made the purchase through the John G. Rapp Company.

The other boat to be used by the expedition was the *Esmeralda II*, which made the 1949 trip with Marston, Hudson and party. *Esmeralda II* was named for an old stern-wheeler used long ago on the lower Colorado. She was built of 9/16-inch marine plywood, and had a Higgins-type bow. In mid-section the bottom changed from a Vee to an inverted Vee section. She was 19 feet long, and had a beam of 5½ feet. She was powered with a 125-hp marine motor. *Esmeralda II* was built by Hudson and son at their home in Paso Robles.

The personnel for the trip was

Otis Marston, pilot of the *Chris-Craft* and navigator for the party, including Joseph Desloge, St. Louis; Guy Forcier, St. Louis, an engine expert; Jordan Rust, San Leandro, photographer. In the *Esmeralda II* party were Edward Hudson, leader, Ed Hudson Jr., Willie Taylor, Berkeley, and Bill Belknap, Boulder City, photographers.

On June 12, with the boats loaded up and gassed at Lee's Ferry, the expedition set out. Disaster struck the *Esmeralda II*, but the *Chris-Craft* arrived at Pierce's Ferry 289 miles down the river on schedule.

As in the 1949 expedition arrangements were made to have gas and food awaiting at Phantom Ranch, Mile 87; Whitmore Wash, Mile 188; and Pierce's Ferry, Mile 289. Each boat picked up 50 gallons of gas at these points—the fuel being carried in 5-gallon cans. They were stored in the after cockpit of the *Chris-Craft*, carefully packed so they wouldn't bounce around.

The two boats started off in company. In the first rapids the windshield of the *Chris-Craft* was smashed and the horn shorted out. However, Marston had figured the windshield might get broken, and arranged pipe so that a board could be lashed across it, taking the place of the windshield.

Bang! Bang! Bang! came three rough rapids the first day. *Esmeralda*

da II had a little engine trouble which delayed them. It was a fore-runner of things to come.

The second day the party stopped at President Harding Rapid and here they found one of the objectives of the trip. It seems that in 1889 a surveyor named H. M. Hansbrough, a member of the ill-fated Brown expedition which was making a railroad survey down the canyon, was drowned here. His body wasn't found until 1890, and then it was buried at the top of the talus, but nobody had ever found the grave again. Marston figured out where it ought to be—and there it was!

The next night the party camped on the river's edge in sight of Desert View Tower, and at a pre-arranged signal lit a fire. This was to give the home-folks, following the expedition along the rim of the Canyon, the idea that all was well with them. However, the fire got out of hand, and gave the folks on the rim the idea that the whole expedition, boats and all, were burning up!

Helicopters began to get into the act. The next night the party camped at Hance Rapid and the following day a helicopter with a photographer arrived. It was tough going from Hance Rapid to Phantom Ranch, so the expedition was glad to stay at Phantom Ranch when it got there. Here, as per plan they took on gas and food. They found out that 53,000 second feet of water was running in the river at Bright Angel—this would have the effect of changing the pattern of some of the rapids from any he had

known. Previous runs were 25,000—1942; 38,000—1947; 25,000—1948 and 60-80,000—1949.

Granite Falls, and Hermit Rapids were run without incident, but just after the boats got through Hermit Rapids, *Esmeralda II* developed engine trouble again—she pulled in below Hermit Rapids and two hours were lost tinkering with the motor. On again, the party shot Boucher Rapid, and in that rapid, disaster stared them in the face!

Esmeralda's motor quit again! However, cool boatsmanship enabled her to be beached without incident, and the party camped overnight. It was decided next day to run the *Esmeralda* down with oars, saving her limited engine power for the rougher rapids. After running one such successfully, suddenly *Esmeralda II* was driven again a cliff, and almost simultaneously Willie Taylor went overboard! However, he was wearing a life jacket, and was picked up without much difficulty by the Chris-Craft. *Esmeralda* was then snubbed into the bank, and the Chris-Craft, after picking up Willie, returned to lend *Esmeralda* a hand if necessary.

Hudson decided to abandon the *Esmeralda*. Since the weight of seven husky men plus all the gas and supplies would have been too much for the Chris-Craft in that wild water, Hudson and his son volunteered to remain on a sandy beach on the south side of the river, while the Chris-Craft made a fast run down to allow Marston to phone from Supai to request the helicopter to come in and lift Hudson and son out.

That night all hands except the Hudsons camped at the mouth of Tapeat's Creek, and Mrs. Marston, following her hunch that something had gone wrong with the expedition, came in via a Hillercopter 360, and camped overnight.

The pilot of the Hillercopter, Elmer Carson, was told of the Hudson's plight and he lifted young Ed out okay, but while attempting to life Ed, Sr., out, the Hillercopter was wrecked on the Esplanade of the Canyon. However, neither pilot nor Hudson were injured. They were within a short distance of Grand Canyon Park headquarters, and were able to get out of the canyon without further accidents.

Rust had left the expedition in the upper half of the run, and so the Chris-Craft continued down the river with five passengers—the new ones being Belknap and Taylor.

The final lap into Boulder City was made without incident, except for getting stuck on a sand bar once.

The Chris-Craft came through in fine shape, according to Marston, suffering only a bent rudder, a nicked propeller, and a few scratches in all those miles of wild going.

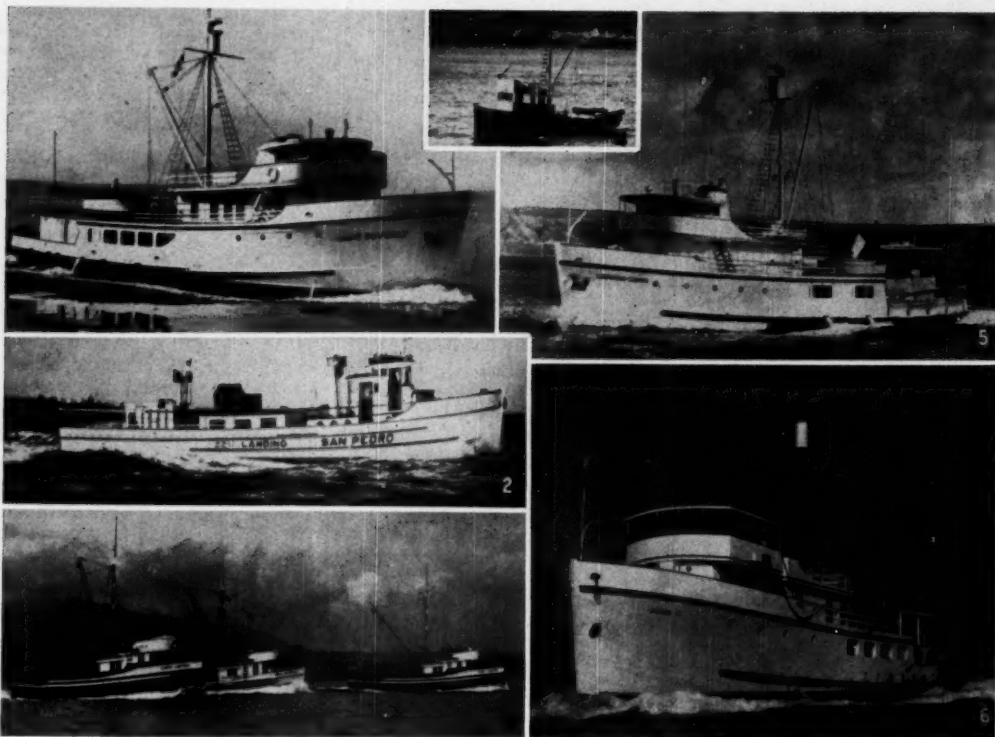
"Her performance was perfect," Marston told a *Pacific Motor Boat* editor. Marston is planning another run down the Colorado next year.

In the meanwhile, Ed Hudson, Sr., is considering making a run down the Colorado River from Needles to the Gulf of California next year. His plans tentatively include the use of a 12-foot outboard-driven, shallow-draft plywood boat, sufficient to carry two men and their gear in what may be another historic trip.



At Tapeat's Creek (left), erroneously named Thunder River, at its junction with the Colorado, a Hillercopter brings in Mrs. Marston to meet the party. Note the Chris-Craft tied in the lagoon. This was the night the Hudsons were left up the river. Photo at right shows the two Hudsons left on the beach after Hudson had quit his boat. They raise their hands in salute to Desloge, with raised hand; Otis Marston, at the wheel; and Guy Forcier, standing on the boat and facing the camera. — William Belknap, Jr., photo.

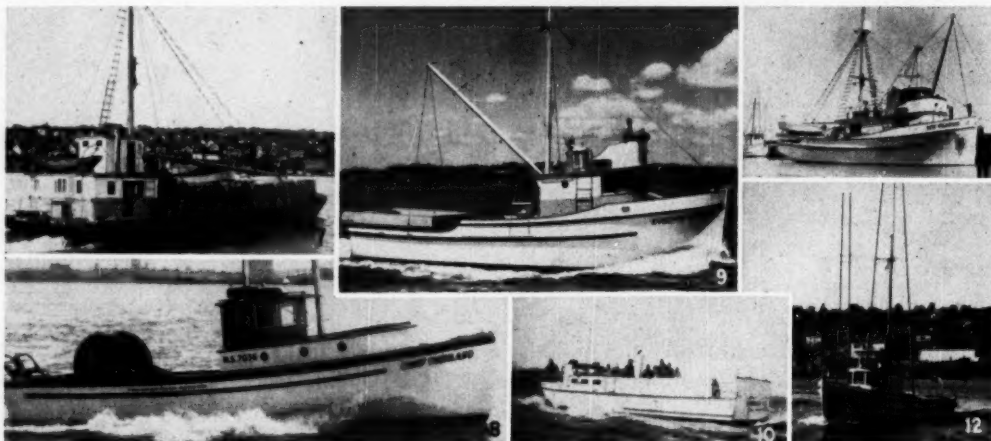
WORK BOATS

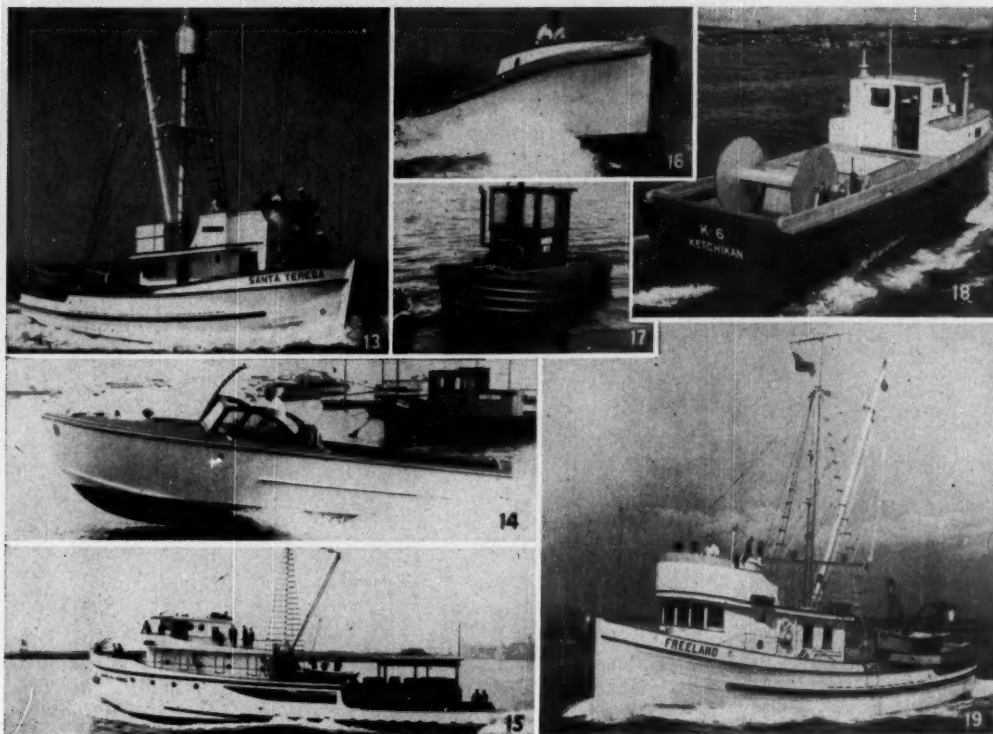


Powerful New Boats of the 1950 Commercial Fleet

(1) Cape Beverly, a 113 x 28-foot tuna clipper, powered by a 615-hp Superior diesel, designed by Wilvers & DeFever, built by J. M. Martinac Shipbuilding Corp. (2) Star Angler, a 64-foot sport fisher re-powered with two G.M. 6-cyl. diesels. (3) Three H. C. Hanson-designed seiners, 65 x 17½-feet, built by Sterling Shipyards. Cape Devon, Cape Dorset powered by 215-hp Caterpillar diesels, Sea Master by a 235-hp Buda. (4) Libby No. 11 is one of three 48-foot, steel-hulled boats built by Birchfield Bailer, Inc., for Libby's. (5) The tuna clipper Hortensia-Bertin was built by Tacoma Boat Building Co. for Capt. C. E. Bertin from designs by Wilvers & DeFever. 103 x 26

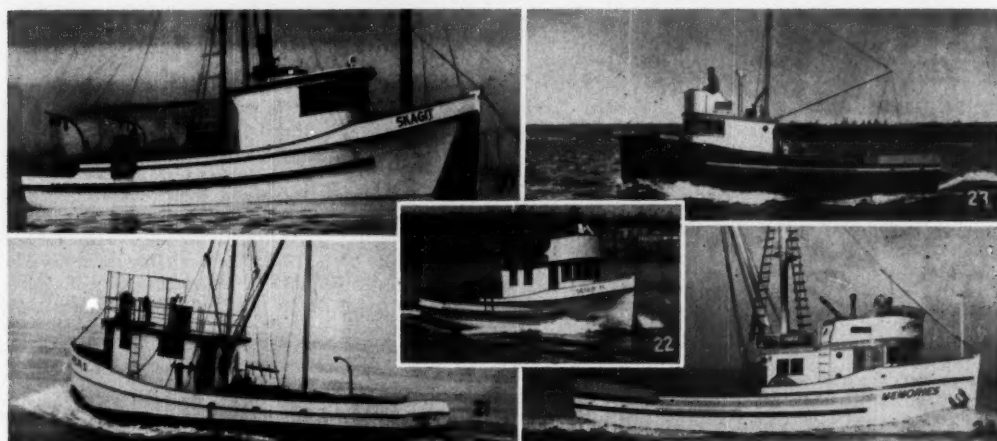
feet, powered by a 465-hp Superior. (6) Vera M., 110 x 27-foot tuna clipper built by San Diego Marine Construction Co. for Capt. Oakley J. Hall. Power is a 6-cyl. G.M. 600-hp diesel. (7) The fishing scow Beaver, operated by Libby's in Alaska, is powered with a Caterpillar diesel D318. (8) Chief Thomlano, a 32-foot Fraser River gillnet boat designed by Robert Allan. Draft, 21 inches. Power, Model 320 Nordberg gas engine. (9) Evelyn Ray, a 45-foot purse seiner, powered with an 80-hp Caterpillar, for Ray Demmert, Metlakatla, Alaska. Plans, Ed Monk & Lorne Garden. Builder, Grandy Boat Co. (10) Fisher No. 1, steel party fishing boat, 45 x 13, designed by L. C. Nor-





gaard, built by Point San Pablo Boat Works. Power is a G.M. 6-71 diesel. (11) *New Vagabond*, 65 x 18 purse seiner, built by Anderson & Cristofani, powered by Enterprise 256-hp diesel, owned by Mariano Torrente. (12) 36-foot troller *Jo*, built by Monson Boat Co. for Floyd Hart. Wm. Garden designed. (13) Wood purse seiner *Santa Teresa*, 55 x 16, built by Al Larson Boat Shop. 135-hp Atlas diesel, 2-to-1 Snow-Nabstedt reduction gear. (14) 26-foot Los Angeles lifeguard rescue boat, built by Essandee Marine Co. Power is a 158-hp Chris-Craft engine. (15) *Marilyn Rose*, a 100 x 25-foot tuna clipper, built by the Long Beach Marine Repair Co., 480-hp Fairbanks-Morse diesel, for Coast Fishing Co. (16) Powered Bristol Bay seine boat, 29 x 10, for Chignik Fisheries. Built by Bryant's Marina from Wm. Garden designs. (17) 13 1/2-foot all-steel boom boat, built by S. Madill shipyards for Pacific Mills. (18) 32-foot Grandy gillnetter, Chrysler Crown

powered, built for Libby's by Grandy Boat Co., Ed Monk & Lorne Garden designed. (19) *Freeland*, 64-foot seiner, built at Harbor Boatyards for George T. Brajcich, powered with a 130-hp Caterpillar diesel. (20) *Skagit*, a 34 x 10-foot troller built for Elmer Frank by Tripple & Everett from Ed Monk & Lorne Garden designs. Power is a Chrysler Crown, 2 1/2-to-1 reduction. (21) *Carmalita II*, 54-foot steel shrimp boat for Mexico. 90-hp, 3-cyl. Washington diesel. Built by Birchfield Boiler, Inc. (22) *Denny M*, 44 1/2 x 12 1/2-foot purse seiner built by Albert Jensen & Sons, for Ed Martell. Designed by B. F. Jensen. (23) *Libby 21*, a 40-foot seiner, Chrysler Royal-powered, built for Libby's by Grandy Boat Co. Designed by Ed Monk & Lorne Garden. (24) *Memories*, a 57-foot purse seiner built by Peterson Boatbuilding Co. Power, 171-hp Buda.





TOWBOATING IN THE WEST

Here are the never-before published facts and figures on the towboat fleet, and the work they are doing. These are the boats that conquered Western Rivers and built the great thriving ports of the Pacific

IN COLD STATISTICS there are 1100 commercial tugs operating in 1950 in the waters of Pacific North America. To men who understand and love boats this is one of the most interesting and varied fleet of work boats afloat. Under squat diesel stacks of some are the trim, beautiful lines of storied steamboats which did their full share in the development of the maritime West a half century ago. Among the newcomers to the fleet are powerful, modern, steel-hulled vessels, unique in design, but practical.

In utilization of new equipment,

Western towboats are adapting electronic aids to navigation and to communication as fast as the skipper can persuade the owners to install the sets. The short-wave, high-frequency ship-to-shore communication sets, a simple but most remarkable installation, has been pioneered by Foss in Seattle and now is being adapted elsewhere.

The work that is being done by Western tugs is detailed in the following pages and should throw some light on the towboat men's claim that their work is the most romantic, exciting, interesting and important in the world.

Only in Pacific waters are found the bulldozer tugs, so-called from their service in breaking up log jams and booming logs for the massive forest industries in the Northwest. In sizes up to 24 and 30 feet, ranging in horsepower from 80 to 240 hp, these are the most powerful tugs for their size ever built.

In the last 18 months about 120 of these blunt-nosed, iron-clad little boats have been built at an investment of nearly a million dollars. This has been the latest and most interesting expansion of the Western towboat fleet.

B. C. Depends Upon Tow Boats

British Columbia's hard-working towboats, ranging in power from 1800 hp deepsea giants to the 50 hp river pygmies, perform one of the province's most useful transportation functions.

"We took a nation-wide railroad strike in stride and it didn't dislocate things too much when the coastwise steamships were strike-bound for a week or so last summer, but it sure would have been an unholy mess if the towboat fleet had been tied up, too," remarked a Vancouver shipping man recently.

The fact is that several of British Columbia's largest seaports as well as scores of upcoast logging, fishing and mining centers have become more and more dependent on tugboats to keep their economic life-blood flowing. The trend towards greater use of tugs and barges has become more pronounced in recent years, and there is no sign of an early downturn. The nature of British Columbia's coastal geography and major industries has dictated dependence on towboats and their auxiliaries. The province just couldn't get along without them.

There are between 220 and 250 vessels of all sizes in British Columbia's towboat fleet, with a replacement value estimated by the B. C. Towboat Owners Association, representing most of the operators, of \$15,500,000. Towboat crews earn a payroll of \$4,000,000 a year, and volume towed, exclusive of logs, is estimated at 5,600,000 tons. While we're quoting statistics we might add that the industry operates 20 derricks and 350 scows and barges up to 1200 tons capacity, including some 40 to 50 covered barges. The industry has gone a long way since the first towboats, burning cord wood as fuel, went to work out of B. C. ports.

In few regions anywhere in the world has the use of towboats become more diversified than in British Columbia. There is a towboat for almost every conceivable marine purpose. With a few exceptions, however, the vessels were not specifically designed for the job they are doing. A tugboat in itself is a pretty versatile craft; it can be used just as effectively for towing a barge of newsprint from Powell River to Vancouver as for hauling a boom of logs from Ladysmith to Fraser Mills. There are towboats in British Columbia which have been effectively used in salvage operations as well as for workaday freight jobs.

Probably the only type of workboat developed in British Columbia for one purpose and which could probably not be used satisfactorily for any other is the boom boat—the hustling little log bulldozer that has come into favor among the larger timber operators on the coast in recent years. These were fully described in a *Pacific Motor Boat* feature last July. So far as British Columbia is concerned, the latest trend in boom boats is towards all-steel hulls, experience being that the pushing and shoving and all-round wear and tear involved in the boom boat's strenuous day calls for maximum durability.

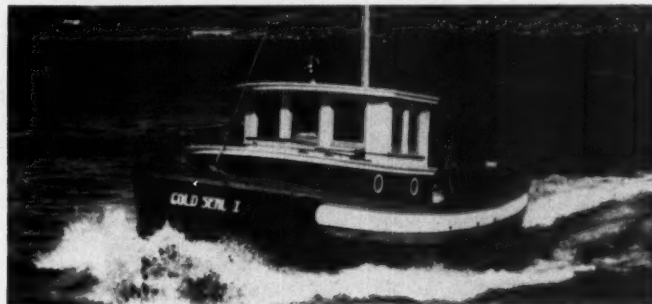
Within the past few weeks a sort of combination push-and-tow boat has been evolved by a Vancouver naval architect, Robert Allan. A 45-foot x 15-foot vessel to be operated on the Fraser River will have a towing winch aft and a pusher-type bow—an all-steel job with half-inch steel plate around the waterline to resist ice and corrosion. Primarily, the vessel will be used for pushing scows, but it can tow them, too.

There have been comparatively few new towboats built in British Columbia in recent years, notwith-

standing the fact that some units in the fleet have seen more or less steady service for half a century or more, and are long overdue for retirement. Coast Towing Co's *Active* was built in 1889 and is still going strong. Cliff Towing Company's *Brunette* was laid down in 1890 and seems to have plenty of spirit. But potentially there is a good market for new towboats in British Columbia, and there is a general feeling that replacements will soon have to be made through new construction.

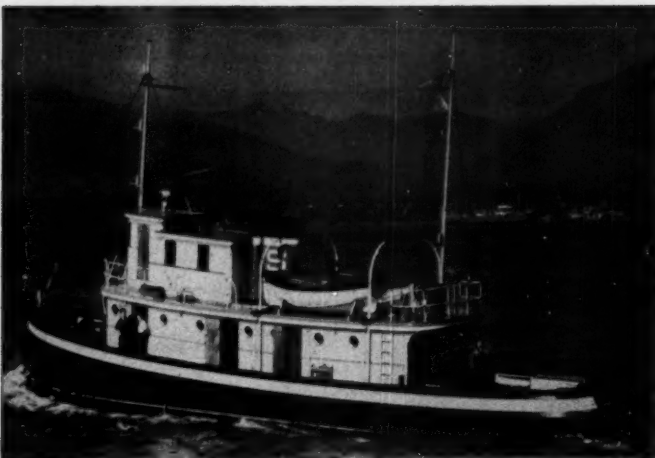
The tendency in recent years, or since the close of World War II, has been to acquire towboats from U. S. war surplus stock or to convert Canadian war craft. Rising costs of building have, of course, been one of the influences encouraging this, plus the temptation on the part of operators to buy a vessel they can see rather than one that's on the drafting board, especially if there's a dollar advantage, too.

One of the most important and characteristic jobs for towboats in British Columbia continues to be the transportation of log rafts. Davis rafts are still used extensively on tows from the Queen Charlotte Islands and other points involving na-



Gold Seal I, operated by Gold Seal Towing Co., Vancouver, B. C., was recently equipped with a P & H 68 hp diesel with a 2-to-1 reduction. This is a two-cylinder, two-cycle unit. Lower photo shows the *River Chief*, now powered by a 6-cylinder, 138-hp P & H diesel. This tug is operated principally on the Fraser River by Harbor Towing Co. These engine installations were the first of their kind to be made in B. C.

WORK BOATS



The Straits Towing & Salvage Co. tug, Burnaby Straits, has a new model P-6 Union diesel.

vigation through exposed waters, but on the west coast of Vancouver Island the Gibson raft, developed by Gordon Gibson of Gibson Bros., loggers, has won wide favor. Possibly the most notable change in log towing in recent years has been the increase in the use of bundle booms, instead of flat booms. This has partly resulted from the handling of smaller logs, but several big companies, notably Canadian Western Lumber Co. and H. R. MacMillan Export Co. use bundle booms for standard logs as well. The logs are bundled either with straps or chains and remain in that condition until final destination has been reached, the fastenings being removed at the mill pond. The technique of towing, however, is the same in each case.

An isolated case doesn't indicate a trend, but an interesting change in policy was effected by the MacMillan company during the past year when it disposed of its big tugs and turned over the log-towing chore for its camps and mills to Island Barge & Towing Co. of Victoria.

From the standpoint of the average British Columbian, one of the most necessary functions of the towboat is the maintenance of the barge hauls between rail terminals and factories and the points of distribution and consumption. A steady parade of open and covered barges passes in and out of Vancouver harbor bound for Vancouver Island points, Howe Sound and upcoast towns. The advantage of barge service over freighter is largely economic and time-saving. Use of

barges means a minimum of waiting at both ends of the trip by the powered unit. The freighter has to remain in port until the cargo has been removed and loaded; the tugboat merely delivers the barge and turns around for another job. Best profits are made when vessels are operated continuously with minimum lay-overs.

The fishing industry is a big user of towboats and one of the innovations in this field this season has been the utilization of the powerful tug *Towmac*, formerly of the MacMillan deepwater fleet, by B. C. Packers, Ltd., for towing dead whales through the waters of Quatsino Sound to the processing plant at Coal Harbor. Until this year, the killer ships operated by this company hauled their catch all the way to the plant, resulting in the loss of considerable time when they might be engaged in hunting offcoast. Use of the towboat as an auxiliary has speeded up the whole operation and resulted in a bigger kill.

One of the conventional jobs for towboats is still the maneuvering of deepsea ships in harbor, and it's still a busy one, as instanced by the fact that the C. H. Cates & Sons maintain a fleet of ten vessels operating principally in that sphere.

About three quarters of British Columbia's towboat fleet is engaged exclusively in the towing of logs or other materials for the timber industry. A 600 hp towboat can tow up to 50 or 60 sections of logs, each roughly 66 feet square. Sections of flat booms are built with side sticks and swiftners, and a tow may consist of three booms abreast of 18 or more sections each. A really



The all-steel Coast Prince, 16 x 8 feet, is a new shallow-draft, tunnel-stern type boom boat, designed by H. C. Hanson and built by Manly Shipyards.

long tow will extend an eighth of a mile. A 60-section tow can total 1,800,000 board feet, and some big deepwater tows from the Queen Charlottes across Hecate Strait have exceeded 3,000,000 board feet.

Practically all towboats now in use in British Columbia apart from those in harbor and river operation are radio telephone equipped and therefore in more or less constant touch with the home office. Advent of the radio telephone has been the biggest single boon to the industry in years, but it's getting to be a pretty old story in B. C. now.

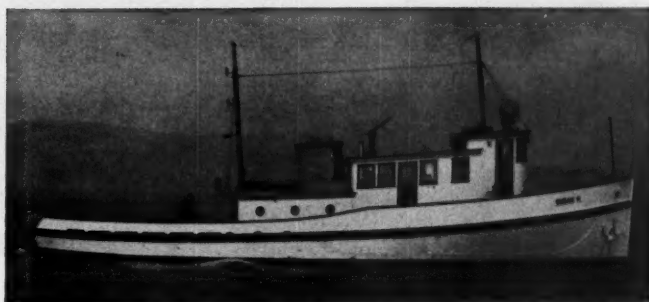
Tow rates vary according to distance, and up and down the B. C. coast the towing range is 650 miles, with most of the individual journeys averaging less than 100 miles. The fee from Port Harvey to Howe Sound storage grounds is \$2.64 per 1000 feet B. M. Daily rates are \$13 an hour per 12 hours for a 100 to 125 hp towboat carrying a crew of three men; \$32 an hour for a 600 hp vessel and \$66 an hour for an 1800 hp tug. Boats are rated according to power for towing capacity, a 600 hp vessel being, for instance, rated as a 50 to 60 section towboat. Flat booms usually run from 16 to 70 sections. The whopping 3,000,000 board foot loads are usually a couple of Davis rafts being towed in combination.

Logging towboat equipment includes tow lines, 20 to 30 boom chains, ties of 100-foot coils of 3/4-inch wire with eye splices at each end, stringers of the same size in eight to 20-foot lengths, large steel shackles, peaveys, crosscut saws, pike poles, boom augers and other tools of the woodmen's calling. The average boom chain is eight feet long, of 3/4-inch steel, and weighs 60 pounds.

Towboating in B. C. waters is an all-year proposition, although most of the volume is handled in the spring, summer and fall, so far as open-water towing is concerned. Few big rafts are towed off the west coast after October.

Puget Sound Tug Traffic Heavy

Four million board feet of logs, about eighty million barrels of petroleum products, 1,250,000 tons of sand and gravel, and 650,000 tons of hogged fuel are moved annually by tow boats on the waterways of maritime Washington, not including the Columbia River. On Puget Sound are at least 160 tugs with an operating crew of five or six hundred and as many as 150 shore-side employees.



So successful is the *Susan H.* that a sister ship has been ordered by the Pope & Talbot Lumber Company for use on Puget Sound. The *Susan H.* was designed and built by Prothero Boat Yard, Seattle, for Boyer Halvorsen of Port Madison and is 60 by 17 feet, 6 1/2 foot draft, powered with a 260-hp Washington diesel. The new tug will be slightly larger.

Logs account for fully 60 per cent of the tow boat business in the state. Tow boat traffic in Commencement Bay is heavy these days, as about half of the logs dumped into salt water come in to Tacoma and to South Bay from the logging camps in the high western slopes of the Cascades. The high price of logs is bringing in heavy rail traffic from Oregon camps to Puget Sound booming grounds. Davis rafts from Alaska, British Columbia and the Cape Flattery area are a common sight moving across the Strait of Juan de Fuca. The slowly-moving tugs with their unwieldy log tows create steady traffic everywhere, from Neah Bay to Shelton.

Take Everett, for example, with its dozen major mills which support a half dozen booming grounds and almost 50 resident tugs ranging from 100-footers to mighty midget boom boats. The Pacific Tow Boat Company of Everett operates its five outside tugs and 14 harbor tugs almost entirely on log towing. Also in Everett are the 20 tugs of the American Towboat Company. Two new tugs were recently added to the

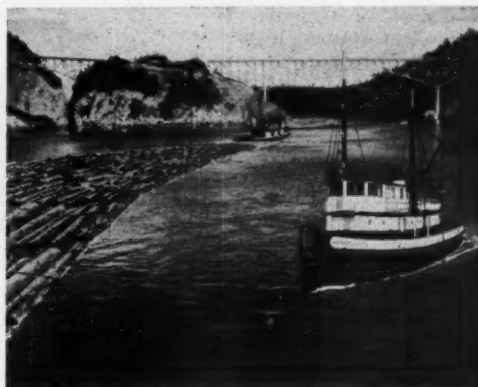
fleet, the *Sequoia* and the *Orinda*.

A few of the big mills operate their own tugs. A typical tug used for log towing is the new one now building for the Pope and Talbot Lumber Company at Port Gamble by the Prothero Boat Company at Seattle. The tug will be 64 feet L.O.A. by 20 feet beam, and will be powered with a new 260-hp Washington diesel.

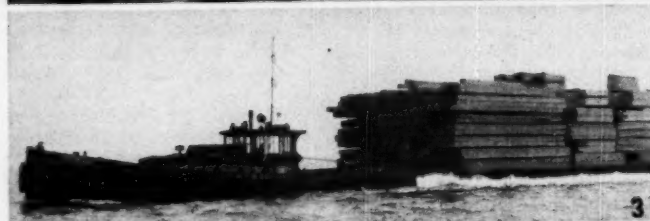
Around Puget Sound the movement of petroleum products is dependent upon tugs and oil barges to a large extent. In an average post-war year as much as eight million barrels are barged. This business is handled mainly by the Puget Sound Tug & Barge Company, the Foss Launch & Tug Company, the Washington Tug & Barge Company, Seattle, and the Standard Oil Company which operates its own tug and barge.

The *Bee*, *Reliance* and *Triumph* of Washington Tug & Barge Company shuttle regularly from tank farms in Seattle and Richmond Beach to numerous points on Puget Sound. This firm specializes in this work in all weather the year around. They

This photo of the *Henry Foss* towing the log raft and the *Matilda Foss* was given national publicity last month in full color advertisements by the Standard Oil Company of California. In the background is Deception Pass bridge.



WORK BOATS



have four oil barges, including the newest and most modern of its type on the Pacific Coast.

Another volume of traffic originates in the heavy movement of hogged fuel from tidewater lumber mills to pulp and paper mills which burn this preferred fuel. Some 8 to 10 barges in tow are constantly engaged in this traffic. Each barge load averages 500 tons.

Such tugs as the *Anne W.* and the *Service* are regulars in the sand and gravel business. Almost all of this traffic originates at the Pioneer and Glacier pits at Steilacoom. The Tacoma Tug & Barge Company, Puget Sound Tug & Barge Company, the Foss Launch & Tug Company, and the American Tug & Barge Company haul a major portion of this business to points as far away as Port Angeles and Bellingham. In this trade alone about 1500 barge loads are towed annually.

The tugs operating on Puget Sound waters are almost all diesel, as only two or three steam tugs are still active. Some of the log patrol tugs and small but powerful boom tugs are equipped with gasoline engines. Average power ranges from 100 to 250 hp.

In Seattle, Tacoma and Port Angeles are based most of the units of the 68-vessel fleet of the Foss Launch & Tug Company. This company operates mainly in Puget Sound, but its big *Mikimiki* sees service throughout the Pacific, as far north as the Arctic ocean, south to San Diego, and west to Hawaii.

Largest of the new tugs to join the Puget Sound fleet this year is the *Wando*, a 130-foot ex-navy tug powered with a 1800 hp Fairbanks-Morse diesel, which the Puget Sound Tug & Barge Company will use to replace the sunken *Neptune*. This rounds out the fleet to 12 tugs with an average of 635 hp per tug.

Another is the *Sea Monster*, formerly the APC No. 20, powered with

Tugs at work on Puget Sound. 1. The *Monarch*, Puget Sound Tug & Barge Company's 1200-hp single screw *Mikimiki* arrives in Seattle with 1½ million board feet of hemlock and spruce from Southeast Alaska. 2. The *Peter M.*, Manson Construction Company's new steel 65 by 17-foot tug, powered by a 500-hp G.M. diesel. Designer was H. C. Hanson. 3. The *Peter*, harbor tug operated by American Tug Boat Company, tows a lumber scow on the Snohomish River. 4. Now back on the job at Port Angeles is the *Foss No. 21*, completely modernized with installation of a 400-hp diesel and all-electrically-operated auxiliaries. 5. The 55-foot *Madrona*, Olson Tug Co., Tacoma, has been repowered with a new 240-hp Buda with 2-to-1 Western reverse and reduction gears.

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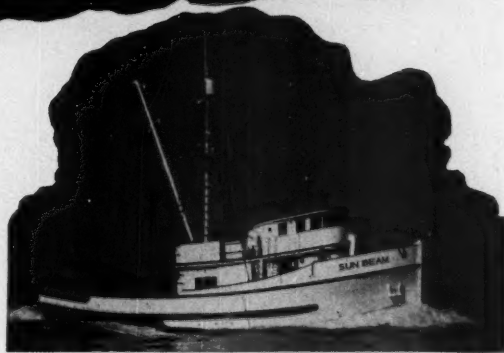
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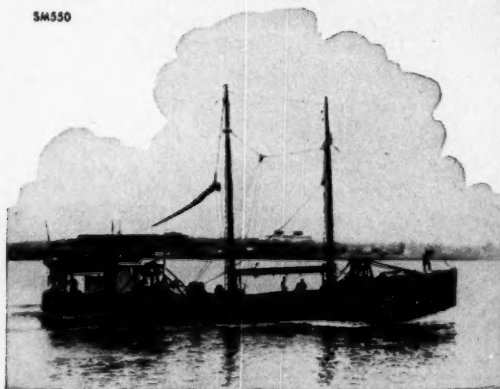
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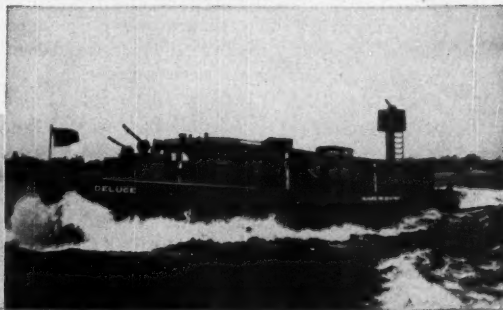
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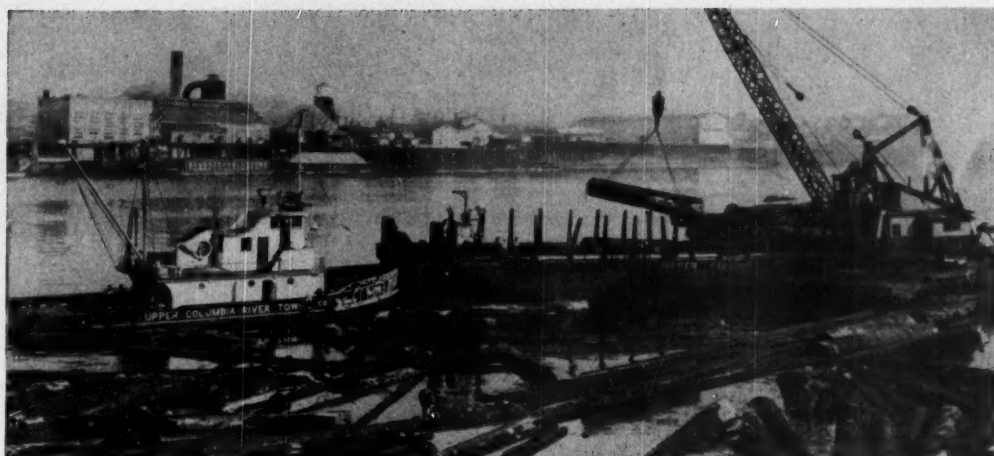
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Upper Columbia River Towing Company's tug *Nez Perce* and combination oil-freight barge deliver a shipment of peeler logs from Bandon, Ore., to a Portland mill, after a 325-mile ocean-river haul.—Larry Barber photo.

a 400-hp Atlas diesel, which will be used mainly for log towing by the Pacific Towboat Company. She is the first of this fleet to be equipped with radar, and she also has a Submarine Signal Fathometer for working in close quarters. Radar equipment is also carried on the *Agnes*, *Donna*, *Christine*, *Wedell* and *Barbara Foss*.

Loran is being considered for use on the offshore tugs of the Foss fleet. The *Agnes* and *Christine Foss* have already been equipped with this positioning device.

Columbia River Pikepole Pushers

The lowly tugboat that appears to be tugging almost helplessly against a quarter-mile raft of huge fir and hemlock logs under Portland's bridges is a criterion of a great industry. It is one of more than 260 tugs and towboats busy towing logs and barges on the Columbia and Willamette rivers of Oregon and Washington, and giving steady employment to more than 1000 towboatmen and helpers.

The Columbia river towboat fleet is declared to be the second largest in the nation, topped only by sprawling Mississippi system. During 1949, the corps of engineers recorded the movement of 9,212,718 short tons of rafted and barged cargo on the Columbia and Willamette rivers outside of Portland's city limits, but it did not endeavor to pick up the short local movements within the harbor. Undoubtedly there was considerable overlap in these cargoes which passed through Portland from one river section to another, but the traffic still runs

into astronomical figures. For example, it amounted to 312,021,621 ton miles during the year.

The largest single movement was 3,938,098 tons of logs and barged cargo on the Willamette river above Portland. Most of this was log rafts bound downstream from the logging camps of the Willamette valley to the lumber mills of Portland and the Columbia river cities. Some of the logs were loaded on railroad cars and hauled to Puget Sound and Grays Harbor to be sliced into plywood. On this same stretch of the river some 741,338 tons of sand and gravel were dredged from the river bed and barged to cement mixing plants and sand and gravel dumps for construction and road-building purposes.

On the Columbia river above Vancouver, cargo moved in local hauls between Vancouver and The Dalles totaled 2,134,052 tons, while through traffic which was destined to points above The Dalles, or originated there, totaled 900,246 tons. On the lower Columbia river, another movement of 2,240,322 tons was recorded.

In each case, log rafts provided the greatest tonnage, with sand and gravel, wood for fuel or pulp, petroleum products, paper, cement and wheat providing the principal blocks of cargo.

To move all of this tonnage, the area has 264 towboats and tugs totalling 98,200 horsepower. They range in size and power from little 30-foot 100-horsepower gas-powered boomboats up to 146-foot 4000-horsepower diesel monsters capable of pushing multiple barge tows or of pulling two or three large log rafts against fast freshet currents.

Newest of these is the 3600-horsepower towboat *George Birnie* which was built for Western Transportation company by Albina Engine and Machine Works from a war-surplus LSM this year. It is a mate to the equally large and powerful and superbly successful *Peter W*, placed in service two summers ago. These boats are used in the Portland-Camas-West Linn harbor area and for towing logs from Western's lower Columbia river booming grounds.

On the upper Columbia the Russell and Tidewater-Shaver companies have placed in service the *Buelah Russell*, *Peggy Belle Russell* and *Betty Lou Russell*, each with 1000

THE TUGBOAT

By Dan Pratt

The tug may not look fancy
To a layman it is true,
But a workboat's mainly handsome
For the things that she can do.

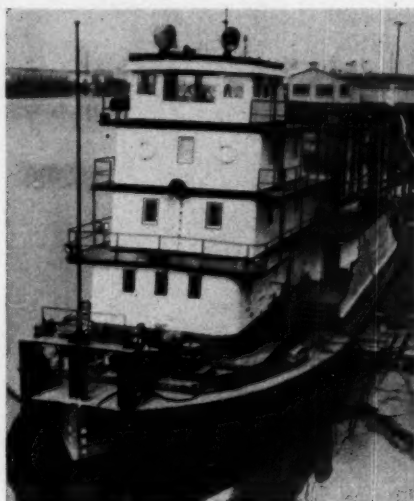
She tows her freight and lumber
And outrides the storms that blow,
For she has Dad Neptune's number
And she must keep on the go.

With booms of logs or barges
She fights the seas unshaken,
And in the end it's safe to bet
That she'll bring home the bacon.

So if she is not handsome
And her homeliness offends,
Remember strength, not beauty
Is what pays dividends.

No, her lines are not as pretty
As a yacht that's under sail,
But she has one line, her tow-line,
That can sure bring home the kale.

WORK BOATS



The 146-foot, 3600 hp diesel towboat, *George Birnie* (left), was completed and placed in service September 28 by Western Transportation Company, Portland. At upper right is the 46-foot steel harbor tug, *Frederick*, being launched by L. S. Baier & Associates for Knappton Towboat Company, Portland. Power is a 6-cylinder Caterpillar diesel. Lower right shows a standard model of the Baier-designed 24-foot boom boat, operated by Fir Tex Insulating Board Company at St. Helens, Oregon.

or more horsepower, and they have two more being built. For the lower river and ocean towing, the converted YMS minesweeper *Tidewater-Shaver* is ready for service.

Among the new boats being completed this autumn is Wilbur J. Smith's *Grizzly*, of *Rainier*, a converted army freight boat in which Smith has installed three 600-horsepower Cooper-Bessemer diesels for power. The stern has been widened to cover the three propellers, and the house structure rebuilt to fit ocean towing, for which it was designed.

Left on the river are only four steam towboats, all of them stern-wheelers of a type that made the river famous a century ago. They are the three-year-old *Portland*, built by the Port of Portland at the insistence of the Columbia river pilots who declared diesel boats were not as capable as the steam stern-wheelers; the *Jean*, built 12 years ago for Western Transportation company; the 38-year-old steamer *Henderson* of the Shaver fleet, and the 32-year-old *Claire*, of Western's fleet. The wooden-hulled *Henderson* and *Claire* have their days numbered.

Knappton Towboat company has two new harbor tugs for moving logs, the *John A.* and *Frederick*, which Fred Meyer, manager, explains are replacements for worn-out wooden hulls. Each is powered with a Caterpillar diesel. L. S. Baier

was architect and builder of both hulls.

A growing volume of logs to be moved from the southern Oregon and northern California harbors to mill towns whose nearby supplies are diminishing is attracting attention from several towing companies, including Wilbur Smith, Portland Tug & Barge company, Upper Columbia River Towing company, Shaver Transportation company, Sause Brothers Towing company and Foss Launch and Tug company of Seattle. Each of these firms already has boats in more or less regular operations between coastal harbors, or is seeking entry into this industry.

Sause Brothers, with the tugs *Chahunta* and *Klihyam*, have been in this coastal run for several years. Foss, Smith and Upper Columbia have been making occasional off-shore tows. Smith's *Tiger*, *Ajax* and *Panther* have been outside, and he recently purchased a new boat, the *Greyhound*, of 1000-hp, to team up with the big *Grizzly*. Upper Columbia has been using the *Nez Perce* and *Winquatt*, the latter with 4000-hp, for outside barge tows. Shaver proposed to operate the *Tidewater-Shaver* in this trade, and Portland Tug & Barge company has the *Mikimiki* type tugs *Teton* and *Osage* ready for coastal service.

Also in the coastal trade are several converted LSM landing craft fitted out as packaged lumber car-

riers. They include the *C-Coaster*, *C-Trader*, *Jesse Andrews* and *Rolando*, which slip into the Umpqua river and smaller Oregon harbors to load for California, sailing with the high tides. Several of the river towing companies already have applied to the interstate commerce commission for certificates to permit them to get into the same Oregon to California trade with general barges.

Redwood Towed in Humboldt Bay

Redwood lumber has long comprised the basis of the economic structure of northwestern California. Since early days tidewater transportation has been a handmaiden of the redwood lumber industry, centering at Humboldt Bay, with towboating a part of the history and traditions of the industry itself.

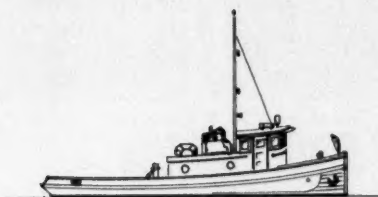
On Humboldt Bay, two names are legendary in connection with towing and ferrying operations—Coggeshall and Cousins. During the latter years of the last century and up until comparatively recent years, the fleets commanded respectively by the late Captain Walter Coggeshall and the late Henry E. Cousins handled the bulk of the business in the towing trade. From New England, both of them, they left their stamp on the business—a stamp that is still in evidence today though successors have taken over their fleets. Captain Coggeshall hailed from Narragansett Bay, and the names he gave his vessels were names familiar in that

Edwin Monk

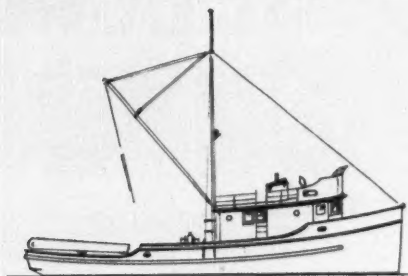
NAVAL ARCHITECTS

EDWIN MONK

LORNE GARDEN



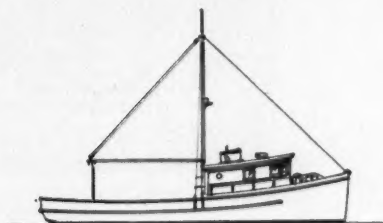
42' TOWBOAT



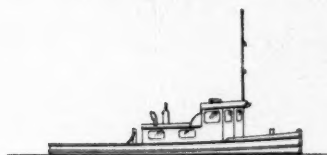
57' SEINER



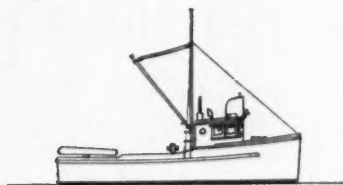
24' BOOM TUG



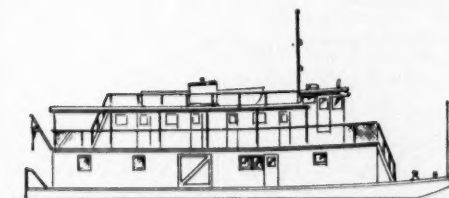
42' TROLLER



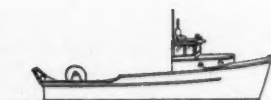
36' RIVER TOWBOAT



34' BEACH SEINER



65' RIVER BOAT—FREIGHT AND PASSENGER



32' GILLNETTER

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The 66' x 17' x 6½' Tug "Susan H" owned by Boyer Halvorsen of Port Madison, Washington, a product of the Prothero Yard.

DESIGNERS AND BUILDERS OF THE TUG "SUSAN H," SHOWN IN THIS ISSUE

(See Editorial Pages)

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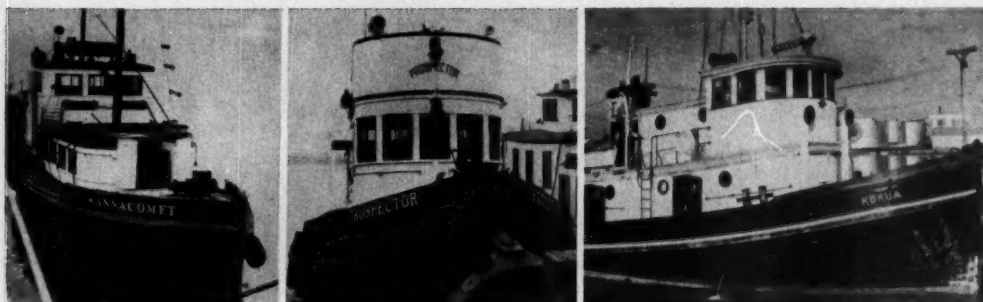
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Tugs operating in Humboldt Bay include the Wannacomet and the Prospector (left and center), operated by the Coggeshall Launch and Lighter Company. At right is the tug Kokuia, which will operate for the Dutton Lumber Company on Humboldt Bay, towing barges from Crescent City to Eureka starting late this fall.

part of New England—Miacomet, Wannacomet and the like. Captain Cousins was from the state of Maine, bringing with him also much of the flavor and tradition of that region. Cousins' son, Captain Willard Cousins, is the official bar pilot for Humboldt Bay, although he no longer operates harbor craft commercially.

Modern successor to the Coggeshall and Cousins fleets and traditions is the company which still operates as the Coggeshall Launch and Towboat Company, now owned by the Hoffman brothers of Eureka. The three brothers, Oscar, Oliver "Bill" and Lester purchased the concern in the year 1945, from P. R. Patton, who was retiring from the business.

The company's fleet of eight boats is manned by the Hoffman brothers and a group of veteran bay pilots and tugboatmen, Mickey Ferrill (number one pilot), David "Bud" Crowell and Ernest Foster, the latter a veteran of the Astoria-Cathlamet country.

The Coggeshall fleet at present consists of eight craft, one of which, the *Imperial*, is under lease. Several of the boats formerly were members of the old Cousins fleet, acquired by the late Captain Coggeshall in the early '30s.

The company-owned boats include the *Miacomet*, *Wannacomet*, *Quidnet*, *Madaket*, *First Commuter*, *Second Commuter*, *Prospector*.

Log raft towing accounts for a major share of the company's operations, principally for the Hammond Lumber Company, Dolbeer-Carson Lumber Company, Mutual Plywood Company and others. Rafts on Humboldt Bay normally run from 100,000 to 250,000 feet, and company records show an average between 30 to 50 rafts per month. Towing in this category is between bay points.

Lumber barging is another profitable source of revenue for the company, running to an average of around 360,000 feet per week, principally for the Hammond Lumber Company between its Samoa and Bayside plants, on opposite shores of the harbor. The barges have a capacity of between 50,000 and 60,000 board feet. Lightering to strips anchored in the bay is now almost a thing of the past.

Miscellaneous towing accounts for the remainder of the operations, chiefly pile-drivers about the bay for Mercer-Fraser Company, Fred J. Maurer or Thomas Hull, local contractors. Occasionally the 50-foot *Prospector* takes on an outside tow, usually to the north. The *Prospector*

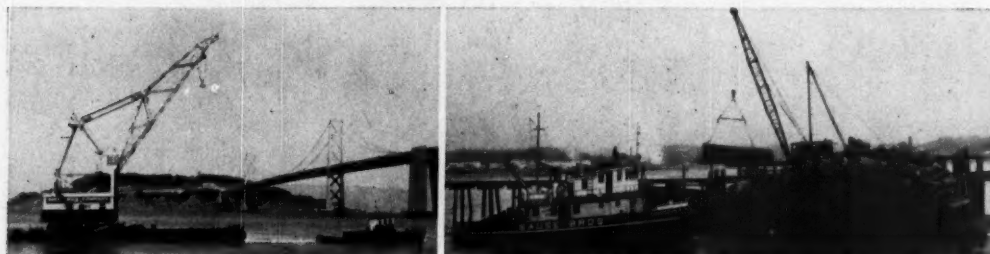
is equipped with two-way radio, direction finder, fathometer and other modern devices.

In December this year, another new venture is in prospect on Humboldt Bay, when the A. C. Dutton Lumber Company is slated to start regular towing service between Eureka and Crescent City. The company owns the fine big tugboat *Kokuia* and a fleet of 13 huge barges (converted wartime craft). The barges are named after lakes in New York state where the main offices of the Dutton company are located. The barges will carry lumber from Crescent City to Eureka for reloading onto larger craft for re-shipment to all points. The Dutton concern contemplates using C-Coaster type of vessel operated by the W. R. Chamberlin Company, of San Francisco, in its offshore exports.

The Coast Pacific Company at present is installing a huge 15-ton "Insley" crane, with a 100-foot beam, largest on the northern California coast. The facility will be available to all towing and barging operations on the bay.

Tugs on San Francisco Bay

As California celebrates the centennial of her admittance to the Union, northern California work



Harbor Tug & Barge Co. tug *Alameda*, twin screw, powered with two GM Twin diesel engines, heads down the Bay with a Smith-Rice Company derrick barge in tow. In the background is Yerba Buena Island, and the San Francisco-Oakland Bay Bridge. At right is the Sause Brothers Towing company tug *Chahunta* with barge loading logs at Crescent City, Calif., for delivery to a Columbia river mill at Astoria.—Lawrence Barber photo.

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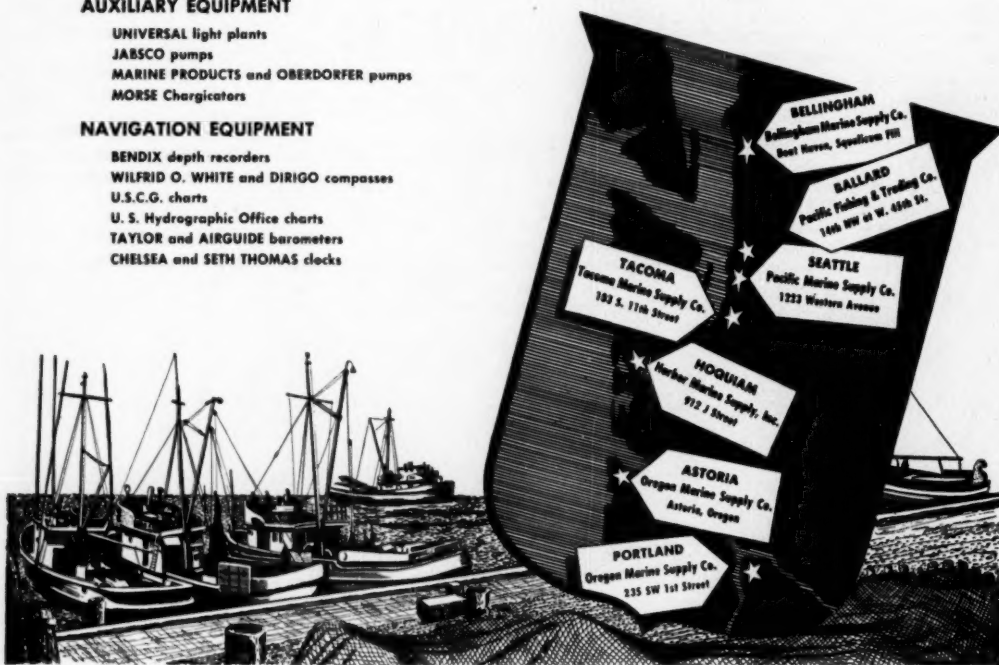
SAFETY EQUIPMENT

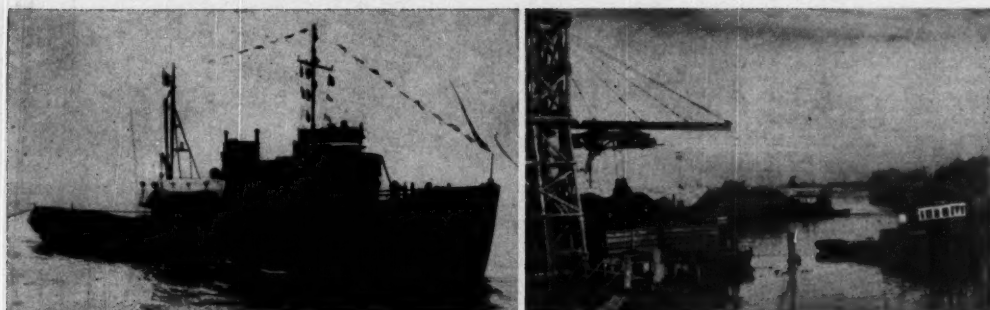
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safe, comfortable, economical operation
of your boat . . .





Sea Lion and her sister ship, Ranger, owned and operated by Shipowners & Merchants Tug Co. (Red Stack Tow Boat Co.), San Francisco, are 143 feet long, and powered with two 900-hp GM diesel engines, with diesel electric drive.

Seven tugs of the Harbor Tug & Barge Co., San Francisco, does practically all the sugar beet towing on the San Joaquin-Sacramento River Delta—some 1,000,000 tons per year. Here is the Peterson No. 18, which has just arrived at the refinery with a barge.

boat operators can feel a little extra proud of their calling, for work boats played a mighty part in the development of the state during the past 100 years.

Steamers and steam tugs took the gold seekers up the Sacramento river to Sacramento, Marysville, Red Bluff and other ports, and up the San Joaquin where they debarked to head for the diggings.

As San Francisco became one of the busiest ports in the world steam tugs warped the graceful sailing vessels into their docks.

Now diesel tugs heave the liners into place at the city's docks. Northern California is the home of more than 100 tow boats of various sizes, owned and operated by about 25 companies having in their fleet from one to 23 work boats.

Some of these companies go back more than 50 years to their beginnings. For example there is the Crowley Launch & Tugboat Co., San Francisco. Thomas Crowley is the founder of this concern.

Crowley in 1895 founded the Crowley Launch & Tugboat Co. The oldest firm of tugboat operators still operating on the Bay is said to be Shipowners & Merchants Tug Co., operators of the Red Stack Tow Boat Co. This company was organized by shipowners and merchants of San Francisco in 1883 as a sort of mutual company, because the then existing towboat services were said to be unsatisfactory.

After a battle for a number of years between Crowley Launch & Tugboat Co. and Shipowners & Merchants Tug Co., in 1918 Thomas Crowley purchased a 20 percent interest in Shipowners & Merchants, and is today president of that company. Under the Red Stack flag are the two largest tugs on the Pacific Coast—Ranger and Sea Lion. They are sister ships, former ATA's,

built in Orange, Texas, 143 feet long over all, built of steel, and powered with twin GM diesel engines 900 hp. each, diesel electric drive, driving on one propeller shaft. They have 12 men in the crew, and they are equipped with Raytheon radar, Submarine Signal Fathometer, and Radiomarine radiotelephone. They have a speed of 12 knots, light.

Under the Red Stack flag are 12 other tugs—three of them steam.

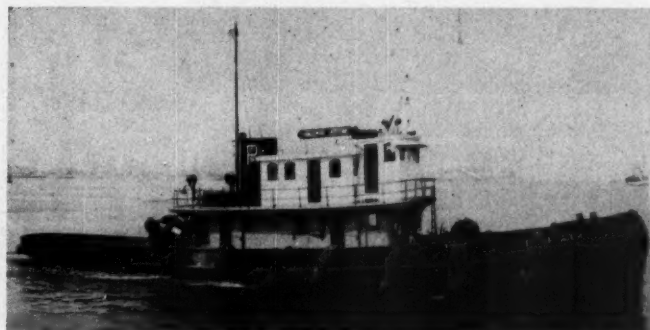
Another Crowley enterprise is Bay Cities Transportation Co., which is owned by Crowley. This company has about a dozen tugs of from 600 hp down, and has 40 or more barges. Most of the towing and towboating work of Crowley Launch & Tugboat Co. is now done by Bay Cities Transportation, and Crowley Launch & Tug as such, has a very small fleet at the present time.

Harbor Tug & Barge Co., San Francisco, also has its roots deep in the past of San Francisco maritime glory. Old-time mariners remember Henry C. Peterson, founder of the predecessor company, who over 70 years ago was, like Thomas Crowley, a Whitehall man.

Peterson, a massive, raw-boned man, later won the title of world's sculling champion in England, and later organized numerous rowing clubs in San Francisco. All the while he was amassing a fleet of launches and tugs which he used commercially, and in 1907 started excursion trips around the Bay.

In 1928 the Henry C. Peterson Co. consolidated with the Oakland Launch & Tug Co., forming the present Harbor Tug & Barge Co., which is headed by Albert D. Elledge. Harbor Tug & Barge Co. is divided into the towing and the passenger transportation divisions. Operating a fleet of some 23 work boats, tugs, water taxis, and sight-seeing boats, the company specializes in hauling sugar beets in the Sacramento-San Joaquin Delta, and each year hauls more than a million tons of the beets.

Beside the towboat companies mentioned above there are a number of active and well-known tugboat firms in northern California. These include the Berkeley Transportation Co.; The River Lines, Inc., Daniel Contracting Co., Islais Tug Boat Co., Thiemann & Johnston



Pacific Atom, 100-foot addition to the Pacific Towboat & Salvage fleet, powered with a 900-hp General Motors diesel engine, equipped with RCA radiotelephone and a new VHF Motorola mobile communication system, and Sperry electric steering. The mighty Atom is the newest vessel of the Long Beach harbor based PT&S fleet.

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COSBUR—52 x 15 ft. 500 hp diesel tug. All welded steel. Built for Burt & Reed Towing Co., Vancouver, B.C. Approved for towing 36 sections of logs.

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25 x 9 ft. welded steel tug. 165 hp diesel. Built for Hammond Lumber Co., Hammond, B.C.

65 x 17 ft. welded steel tug. 500 hp diesel. Built for Manson Construction Co., Seattle, Wn.



H. C. HANSON, NAVAL ARCHITECT

102 COLMAN FERRY TERMINAL

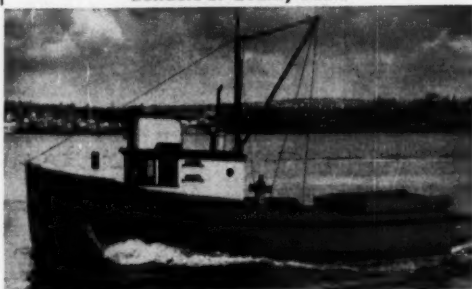
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Launch & Tugboat Co., United Towing Co., Jim Wilder Co.; San Francisco Towing Co., California Tugboat Co., LeBoeuf & Dougherty Contracting Co., and Richmond Navigation and Improvement Co., both of Richmond; Guntert & Zimmerman, Stockton, and Les Fulton with his *Bear Flag*, Antioch.

Other companies like the Santa Fe and Western Pacific railroads, the Pacific Portland Cement Co., Standard Oil Co., maintain fleets of tugs and barges for their specialized work.

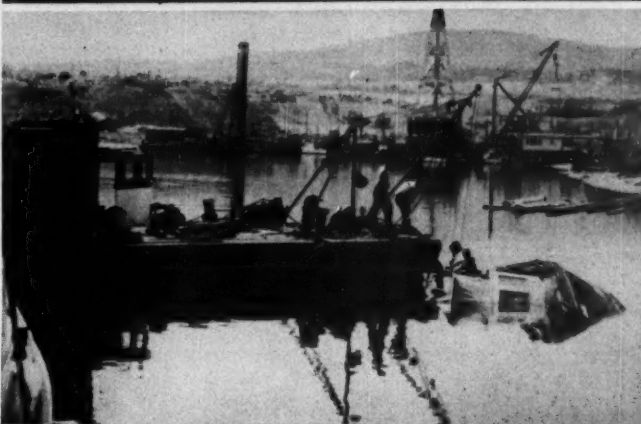
Los Angeles Tugs Are Versatile

From the smallest yard tug to the powerful vessels of 1000 horsepower, the work boat fleet of Los Angeles-Long Beach harbors is famed for its dependability and versatility. Jobs range from piloting merchant vessels to dock, towing rock barges and fueling barges to rescuing fishing vessels and yachts from the treacherous waters of Mexico and Baja California.

Each year finds the introduction of new and specialized equipment. This year the Pacific Towboat & Salvage Co. equipped four of its powerful tugs with mobile Motorola radiophone communication sets. On the company's barge headquarters is the master station, using its own frequency of 156,500 kilocycles, on KMB270. Soon to be in use are two "Pack" radios. The Motorola sets operate on VHF—very high frequency—and give the towboat company an exclusive channel with a 28-mile range. With these sets it is possible to listen in on the Long Beach harbor department's pilot station to pilot communications.

PTS operates nine tugs: *Kanak*, Fairbanks-Morse powered; *Pacific Atom*, rebuilt in 1949, and powered with a 900-hp GM-Cleveland diesel engine; GM-powered *Pacific Retriever*, which during 1950 returned many a disabled tuna vessel to port; Atlas-powered *Pacific Rocket*; Atlas-powered *Palomar*; GM-powered *Pacific Explorer*; salvage tug *Pacific Salvor*; *Pacific Surveyor*; *Pacific Rescue*. In 1950 the company moved into its new headquarters opposite the office of the Long Beach Harbor Department, a concrete-steel barge which replaces the historic old *Samar*. During 1950 the PTS's fleet logged 100,000 miles, ranging down the coast of Mexico and north for lumber tows from the Pacific Northwest.

United Towing Co., under Bill Orwig, during 1950 expanded operations considerably with the ad-



Racona (top), 75-foot Superior-powered tug, towing two scows to and from Catalina Island, contributed to the construction of the huge Federal breakwater at Long Beach by hauling 2,000 tons of rock each trip. She is a part of the Case-Connally fleet. Skipper is Roy Melius. The lower photo shows the salvage of the fish boat *Koafineo*, which sank at Terminal Island, by Donohugh's Boat Service, Wilmington. Capt. W. N. Donohugh put his derrick barge, his twin-screw water taxi *Norconian II*, and his tug *Klickitat*, to work and raised her in West Basin.

dition of a tug and several fueling barges and is now the only company specializing in the towing of fueling barges in the harbor and outside to anchored vessels requiring service. The Wilmington company, affiliated with the Crowley interests of San Francisco, now operates the fueling service with its own barges and has under lease Richfield and Texas steel floating equipment. A typical month saw the Enterprise-powered *Reliance* make 133 tows; the Atlas-powered *Pacific*, 91; and the "Caterpillar"-powered *Crowley No. 26*, 80. *Crowley No. 9* has only recently transferred to the UT fleet.

A typical month also recorded 110 trips for Barges, 2, 3, 5, 9, 1929, 259 and 61. Barge 1927 has a unique cargo, molasses taken from Mattson liners to the Pacific Molasses Terminal—she made four trips during the month of August. Barge No. 4 has been put into shape after her recent acquisition.

The huge steel barges are equip-

ped with either gear-driven or centrifugal pumps. There are from six to eight steel fuel tanks per barge. Each tug carries a skipper and an engineer; each barge, a tankerman and a deckhand.

Precautions against fire are vital and every barge has a Foamite system with 1½-inch electrically driven fire pumps. Each tug has a CO₂ system.

A new company, Alaska Towboat & Salvage Co., is preparing to enter the Long Beach harbor service with several vessels including the *Alaska Queen*.

Oldtimers in San Pedro harbor continue their dependable service: San Pedro Tugboat Co., (*Red Stack*), and the Catalina Steamship operated fleet, formerly Wilmington Transportation Co. *Red Stack* put to work in October a new long-distance vessel, *Navigator*, formerly the *Geronimo* from Honolulu. She is a diesel-electric tug of 750-hp, 104 feet long and with a speed of

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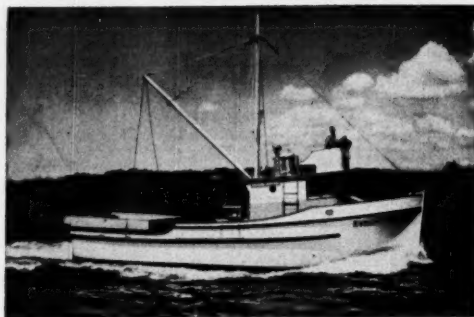
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The *Smitty* is a free-lancer in the Southern California fleet. She is an ex-navy tug, propelled by three GM diesels of 175-hp each, driving through Western Marine gears, 4-to-1 ratio on the inboard gear and 3-to-1 on the two outboard units. Captain McGillivray has named his new vessel *Navigator* after one of the most powerful tugs on the coast, a San Francisco craft now operated by the Navy.

One of the longest voyages by the Red Stack *Relief* (Enterprise-powered) was a tow of LSMs to Port Arthur, Texas, Larry Edwards, skipper.

The towboat division of the Catalina Island SS Line, under Capt. Bill Boyd, continues its honorable tradition of serving Los Angeles Harbor since 1919. All vessels here are equipped with 25-watt Radiomarine radiotelephones. Several months ago one of the fleet, the *Jimmy K*, was sold to Mexican fishing interests.

Case-Connally, Long Beach, has finished, for the time being, its massive job of hauling rock from Catalina Island for the construction of the Federal-Long Beach breakwater, during which *Rocona*, *Dispatch No. 2*, *Sonoma*, *Billcona* and *Patcona* hauled 12,000,000 tons of rocks.

Donohugh Boat Service, San Pedro and Wilmington, operated by genial Capt. Bill Donohugh, continues its tow boat, water taxi and diving and tending services to the waterfronts.

Towboats Run Harbor of the Sun
Star & Crescent Boat Company's towing and workboat operations are tailor-made for San Diego's "Harbor of the Sun," and have been for nearly half a century, under the management of the principal owner, Captain Oakley J. Hall, and today assisted by his eldest son, Oakley J. Hall, Jr., as superintendent.

The company dovetails its activities to meet requirements of the

beautiful harbor's needs. For example, San Diego is the home of the far-ranging tuna clippers; hence there is a fleet of offshore tugs for salvage and towing, headed by the 106-foot, 1600-hp G. M.-powered *Challenger*, put into service a year or so ago.

A major operation since 1923 has been hauling gasoline, diesel fuel and lube oil from Los Angeles harbor to San Diego. A subsidiary, Star & Crescent Oil Company is Associated Oil distributor for San Diego county. The company hauls its own supplies and also for other major oil companies. It also builds its own vessels by another subsidiary, San Diego Marine Construction Company.

For its fuel-hauling Star & Crescent uses several tugs and tankers, in addition to huge steel lighters of its own. In this operation the *Challenger* is partially employed; the tanker *San Diegan*; Washington-driven *San Miguel* and the multiple General Motors-propelled *San Jacinto*.

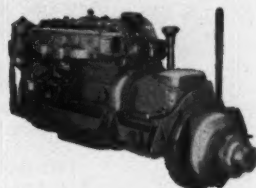
Ferrying military personnel from bases around the harbor has long been a major operation. Some years ago the company built six 65-foot double ender, two-deck ferries, driven by twin Cummins diesels, with Twin Disc reduction. These are augmented by a large fleet of Cummins or General Motors-driven shoreboats and water taxis, for ship-to-shore transportation.

Lastly, there's the tourist trade, and hardly a day has passed since the company was formed when it failed to operate the twice-daily two-hour harbor excursion. Today that service is performed by the 65-foot twin Cummins-powered *Silvergate*. Probably a million passengers have been carried by a vast assortment of vessels since the early part of the century.

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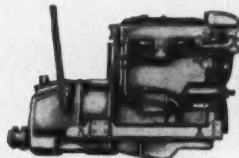
WORKBOAT ENGINES



SIX-330 (Gasoline)

This capable model is built in two styles: "Lugger Six-330"—rated 96 hp at 2400 rpm, and "Express Six-330"—rated 124 hp at 3200 rpm. Both have 4" bore and 4 1/2" stroke, piston displacement 330 cu. in. Built the way an engine should be for heavy duty service, from a powerful cylinder block with good thick wall area, seven main bearings, 2 1/2" crankshaft, water between all cylinder bores, full length water jackets and automatic temperature control.

Large Paragon reverse gear provides oversize capacity. Choice of reduction gear ratios 2:1; 2.5:1; 3:1; 3.5:1; or 5:1. Choice of 6 or 12 volt electrical system. You can select a model directly cooled by sea water, or if you prefer you can have it with fresh water cooling system, using either inboard or outboard type heat exchanger. Twin Disc Power Take-off available.



FOUR-260 (Diesel)

Illustrated above is one of three Diesel sizes built by Gray, 260 cu. in., conservatively rated 50 hp at 1800 rpm. It uses a massive cylinder block, which has established an exceptional record in industrial service, and in large volume. It has wet type cylinder liners, sturdy 2 1/2" crankshaft, hardened steel inserts under exhaust valves, and new type Bosch fuel pump. 12 volt electric system with 18 ampere generator. Twin Disc reverse gear with reduction ratios of 2.36:1 or 3.2:1. Twin Disc Power Take-off available. Closed system fresh water cooling is standard, with automatic temperature control, and choice of inboard or outboard heat exchanger (show below).

Other Graymarine engines for workboat service include gasoline models from 162 to 427 cu. in. and Diesel models from 157 to 572 cu. in. Write for complete specifications, and name of nearest service station.



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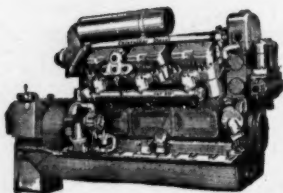
Back in 1938 when American Tug & Barge Co. of Everett, Washington, pulled the steam engine out of their tug "Chickaleon" and put in one of the "new" Caterpillar Diesels, they probably knew they were making a wise move, but they probably didn't know they were making history. The Caterpillar D17000 in the "Chickaleon", with at least 60,000 hours behind it, is still running like a Swiss watch. In a recent 90-day period it averaged 5 1/4 gallons of fuel per hour.



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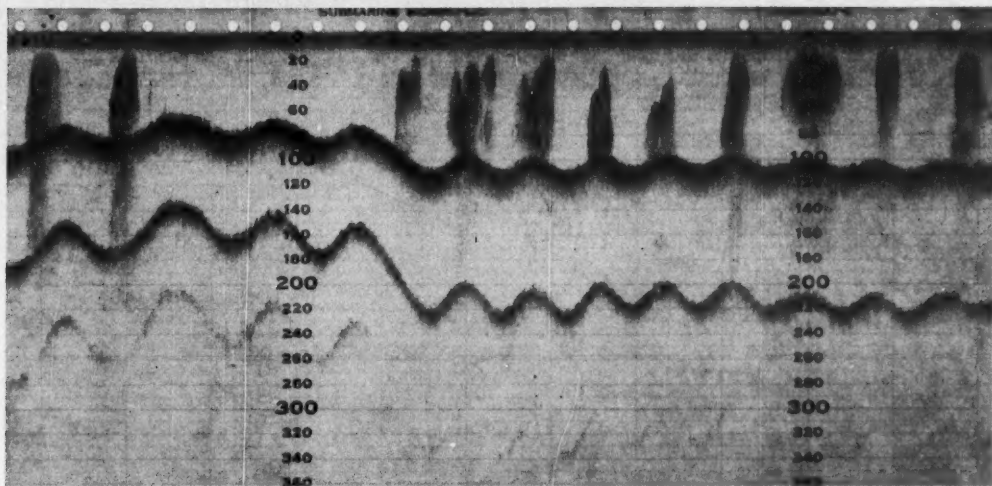
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Electronic bait finder. Above, a tape from a Submarine Signal Fathometer recorder aboard the Albacore and bottom fishing boat *American II*, owned by George Knowlton, indicates the presence of a good-sized school of sardines, varying in depth from 30 to 100 feet. The recording pictured here was made on the 500-foot range. Note that the gain control of the Fathometer has been advanced to the point where a multiple or second echo, or twice the depth, is visible, also in some place a third multiple is faintly visible. At right, Capt. Bill Odette of the bait hauler *Sonny*, Newport Beach, studies his red light indicator on the Fathometer Jr. Odette is so experienced in his operation of the Fathometer that he can tell whether he is over sardines or anchovies—the former appearing as a solid, wide flash, the latter as a number of small flashes.



The *Matt Walsh*, which joined the sportfishing fleet of Pierpont Landing, Long Beach, last summer, now has a Bendix DR-7 Depth Recorder, which Skipper Kenneth Davis (right) has found useful in locating the "hot spots" in bottom fishing. With the Depth Recorder Capt. Davis can also ascertain whether the ocean's current is running above the kelp or below it. Another Bendix-equipped sportfisher, *Mascot III* out of San Diego, uses its recorder in finding rock cod—the instrument indicating concentrated or individual fish.

Bremerton Yacht Club Wins Inter-Club Cruiser Race

BREMERTON YACHT CLUB'S team of cruisers captured the third annual Pacific Northwest Inter-Club Race October 1, which was staged under the sponsorship of the Seattle Yacht Club out of Port Madison, Bainbridge Island.

Bremerton Yacht Club won with a total of 76 points garnered by her team of four boats, the *Spar*, Art Mosher; *Donalie*, Ray Hart; *Conquest*, Hi Garrett, and *Nisimaha*, L. A. Tucker.

Point standings of the other clubs participating were: Tyee Yacht Club, 54; Everett Yacht Club, 52; Queen City Yacht Club, 48; Seattle Yacht Club, 36; Rainier Yacht Club, 26, and Tacoma Yacht Club, 8.

Overall individual honors were taken by Tyee Yacht Club's Harold Salvesson in the *Sea Tramp* with 1.371 percent of error for the course. He was followed by Art Mosher's *Spar* of the winning Bremerton team, 1.628 percent. Placing third was another Tyee Yacht Club boat, the *Vagabond*, Jack Myers, 1.825 percent.

Announced the evening before the race, the course for the predicted log event started at Port Madison, thence to control points off Foul Weather Bluff, Possession Point, finishing at Indianola Dock, Port

Madison. Conditions were ideal for the race.

Many favorites were found to be comparatively low in the results due to a number of factors including misjudging of tide conditions. Dr. George Knowles, overall winner of the recent International Cruiser Race was penalized heavily due to engine trouble, penalties bringing his average down from third place to next to last.

Judges for the inter-club event were F. A. Harvey, S.Y.C.; F. B. Mossman, Q.C.Y.C., and T. Marx Libby, B.Y.C.

Complete results follow:

Boat	Skipper	% Error	Club
1. <i>Sea Tramp</i>	H. Salvesson	1.371	Tyee
2. <i>Spar</i>	Art Mosher	1.628	B.Y.C.
3. <i>Vagabond</i>	Jack Myers	1.825	Tyee
4. <i>Docsout</i>	Ed Chase	2.334	Everett
5. <i>Donalie</i>	Ray Hart	2.588	B.Y.C.
6. <i>Mary Jane</i>	Phil Luther	2.607	S.Y.C.
7. <i>Conquest</i>	H. Garrett	2.636	B.Y.C.
8. <i>Three Jays</i>	Hugh White	2.775	Rainier
9. <i>Holiday</i>	R. Rathbone	2.852	Q.C.Y.C.
10. <i>Nisimaha</i>	L. A. Tucker	2.982	B.Y.C.
11. <i>Nina Ray</i>	Ray Strobe	2.985	Q.C.Y.C.
12. <i>Aldon</i>	A. Bowles	2.996	S.Y.C.
13. <i>Snuffy</i>	F. Morris	3.277	Everett
14. <i>Mimi</i>	N. Collins	3.608	Q.C.Y.C.
15. <i>Sarah Jane</i>	J. Fritz	4.331	Everett
16. <i>Nickensu</i>	J. W. Graham	4.690	Everett
17. <i>Silver Spray</i>	J. Shipley	4.693	Tacoma
18. <i>Biljim II</i>	V. Brice	4.821	Q.C.Y.C.
19. <i>Bonita</i>	H. Hall	5.240	Tyee
20. <i>Connie B.</i>	E. H. Wilson	5.247	Rainier
21. <i>Beulah M.</i>	Roy Palm	5.389	Rainier
22. <i>Kalela</i>	R. Byington	5.998	S.Y.C.
23. <i>Teco</i>	R. Thompson	6.032	Tyee
24. <i>Sea Chum</i>	G. Knowles	7.568	S.Y.C.
25. <i>We For</i>	E. G. Henry	8.233	Rainier

Bill Roedde Winner In Sandheads Race

BILL ROEDDE, sailing the *Carita*, won the overall competition in the Royal Vancouver Yacht Club Sandheads Lightship race, and thereby qualified for the Minerva Trophy and also the Duncan Bell-Irving Trophy, which was awarded for the best time to be made by a Roedde class boat.

Roedde thus carried off some of the major honors in 1950 racing in British Columbia because he had previously gained the Sir Thomas Lipton Cup for his vessel's performance at the Cowichan Bay regatta.

Second in the overall time for the Sandheads event was Vic Fox's *Serena*. Second among Roedde class vessels was Bert Tupper's *Vogat*.

In various other classifications winners in the same day's events were Ken McKenzie's *Elasaid*; Percy Burr's *Oho*; Gus Ortingren's

Gometra; Doug Urry's *Creaset*, A. W. Nyblom's *Ganessa*; Dr. Hugh Ross, Dr. Roy Anderson's *Deunde* and Gil Biller's *Rebel*.

An interesting development has been the growing popularity of the Roedde class boats, and ten of them, built from the same mold, are now being sailed, eight of them in Vancouver (one in the Kitsilano Yacht Club and the others in Royal Vancouver Yacht Club), one on Vancouver Island and, representing international adoption, one by Dr. Ed Foster, Bremerton.

Originator of this class and its most successful exponent in the competitive field is Bill Roedde, but the boat itself was designed and built by the late Tom Holliday, who died a few months ago, for many years one of the best known yacht designers in the Northwest.

Colorado Marathon Sweepstakes Honors Won by Lee Burris

Lee Burris of Gardena, Calif., in a Wincraft powered with a Johnson PO 22-hp outboard took sweepstakes honors in the third Colorado River Marathon for stock utility outboards October 1. The Class C entry broke the 1949 record, as did all the winners of the 1950 classic, and averaged 34.94 miles per hour.

Class A: Lloyd I. Huce, mayor of Yuba City, Calif., 38.12 per hour. Rockholt powered with Mercury Rocket Hurricane of 7½ hp.

Class B: Wayne B. Rudasill of Needles, Calif., 45.58 miles per hour, Fleetliner, Mercury Hurricane, 10 hp.

Class D: L. A. Andrews of Needles, Calif., 50.19 miles per hour, Speedliner, 25-hp Mercury.

Class E: Harold Gaston of Banning, Calif., 40.13 miles per hour, Inland, Evinrude Speed-i-Four, 33½ hp.

Class F: Paul Rawn of Oakland, Calif., 45.08 miles per hour, Inland, 50-hp Evinrude.

The use of Mobiloil outboard and Mobilgas by each winner of the western racing classic featured this year's event.

Pacific Motor Boat in its December issue will report fully in pictures and in story the 1950 Colorado River Marathon which has attained for Western boating enthusiasts the same high standing as the New York-Albany race for the East Coast.

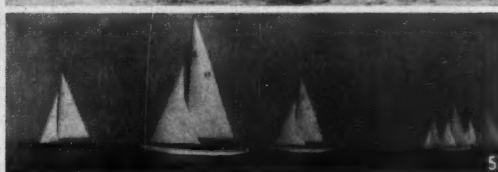
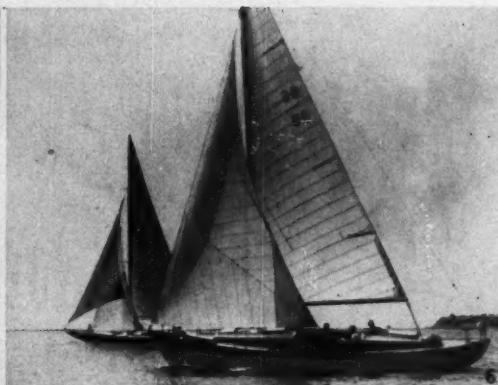
The race was from Topoc on the Colorado River to Parker Dam and return, an 85-mile course. Louis Burt is chairman of the Colorado River Marathon Association.

St. Francis Yacht Club

After five months of competitive sailing the San Francisco sailing yacht racing season ended with the St. Francis Yacht Club regatta last month.

Winners were: Acorn class, *Eight Ball*; Rhodes 33, *Satisfaction*; 210 class, *Ripples*; Golden Gate class, *Fun*; Bear Class, *Wiki*; Junior Clipper class, *Sassafras*; Star class, *North Star II*; Windward class, *Pagan III*; PIC class, *Blue Peter*; Hurricane class, *Mistral*; Bird class, *Cuckoo*; Division 7, *Ace*; Division 8A, *Java Head*; Division 8B, *Sonata*; Division 9, *Flame*; Division 11, *Valero*; Division 14, *Kodiak*; Division 15, *Penguin*; Division 17, *Squali*.

Boating Under Southern Sunny Skies . . .



by Bob Ruskauff

1. Angling and cruising—bound for the most there can be in a pleasant day, George Pleger's 50-footer *Lingsha* and the 40-foot *Wheeler*, *Jimrose*, owned by James C. Manning of Newport, prowl out from Newport Harbor jetty.

2. Ed Olsen in *Honey Bee* (47-E) and Dick Scott's *E-Runabout* winner and 1949 National high point boat, *Little Benny* (1-E), briefly glimpse the fate of their rival, Ollie Prather, who gets assist after flipping *L/I Injun* on the tricky east turn of Long Beach Marine Stadium during the ninth all-western Inboard sweepstakes, Labor Day.

3. West's three fastest—Ernie Bender's *Thunderbolt* took Div. 1 225-cubic-inch hydro honors in the rough-shod Labor Day meet, although Morlan Visel's *Hurricane* made best qualifying time while Bob Sykes' *The Dutchess* was runner-up. Nine Div. 1's were on deck, best fleet of the year.

4. Jovial committee—everything clicked so smoothly in the Sept. 4 meet that there was ample reason for committee smiles. Standing are Chief Timer J. Otto Cracker (left) and Referee Kenny Harman.

5. Slipping through light fog and overcast in a gentle sea, the morning of Sept. 23, 15 PC and Rhodes sloops started their two-leg Newport-Avalon-Newport cross-channel sailing race. Bill Kircher's *Janirva II* (Rhodes 37) won the windward leg, but, over-all, the Rhodes honors and the Myer trophy went to the girl sailor Mary Ann Pearcy of the Newport Harbor Yacht Club in *Whim*, while Comm. Fred Smales' *Pamlin*, Balboa Yacht Club, successfully defended the George Strom PC trophy.

6. *Rocking Chair II*, newest of the shallow-draft, planing type sloops from the boards of Bill Lapworth, made her racing debut in the Santa Barbara Island race under hand of Willis Bayd. She's pictured here moving up to harbor light to leeward of Ted Schmidt's 10-meter *Hilaria*.



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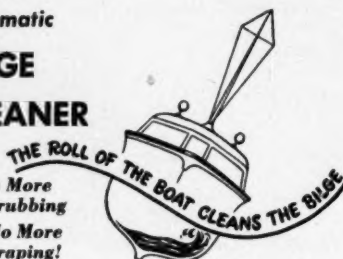


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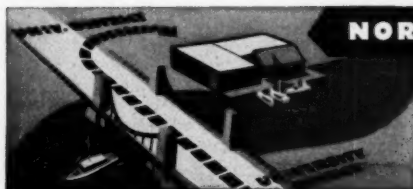
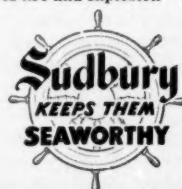
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"Bobbie" Wins State Fair Cruiser Race

RAY HALL of the Class C cruiser *Bobbie*, representing the Sausalito Cruising Club, was winner of the Northern California Power Cruiser Association's annual State Fair Race, Steamboat Slough to Sacramento, September 3. The *Bobbie* logged the 27-mile course in but 56 seconds error for first honors.

The race was run during a heat wave with not even a breeze relieving the temperature which was in the low hundreds. The Sacramento Yacht Club, under Race Manager Marvin Cardoza, was host to the event which is sixth in the season's 7-race program to decide the San Francisco Bay championship. The next event is the Golden Gate Yacht Club's General Petroleum-sponsored finale.

By classes, here are final results:

Class A—1. *Almaz II*, M. Kniesche Sr. and Jr., St. Francis Yacht Club, 68 seconds error; 2. *Malulani*, J. D. Adam, Sacramento Yacht Club, 77 seconds; 3. *Nam El Oh*, M. B. Holeman, South Bay Yacht Club, 112 seconds.

Stuart Ball's "Coho" Wins Annual C. R. Y. A. Predicted Log Race at Portland

CCROSSING the finish line only three seconds early after a 16-mile run, Stuart W. Ball, of Portland Yacht Club, won the Columbia River Yachting association's annual predicted log race at Portland, September 24, with a percentage of error of only .692.

Ball, who skippered his 39-foot Matthews cruiser *Coho* to victory, was closely pressed by Art Randall, vice commodore of PYC, who



The annual Sacramento River power cruiser race draw a fleet of 48 cruisers, some of which are visible here in moorings of the Sacramento Yacht Club.—Paul Tracy photo.

Class B—1. *Minnie M.*, J. W. Morrison, Oakland Yacht Club, 82 seconds error; 2. *Sarah Ann*, R. G. Dan Boone, Pt. San Pablo Y. C., 93 seconds; 3. *Hiltot II*, R. B. Engfer, South Bay Y. C., 94 seconds.

Class C—1. *Bobbie*, Ray Hall, Sausalito Cruising Club, 55 seconds error; 2. *Isabelle*, J. F. Ferreira, Sausalito Cruising Club, 61 seconds; 3. *Audrey*, K. A. Adams, Delta Y. C., 106 seconds.

rather dramatic finish of bunched boats which nobody was able to photograph owing to dark, rainy weather at the time.

Other finishers, with their boats, clubs and percentages of error, follow:

Gail Green, *Impulse*, CRYC, 1.033; Julius Fink, *Stormalong*, PYC, 1.325; Manuel Glanz, *Chastina*, RCYC, 1.535; Lawrence Barber, *Rambler*, PYC, 2.528; Chester Benson, *Chetco*, PYC, 2.545; Harold Koppang, *Loafer*, PYC, 2.765; Bud Beedle, *Sparky B*, RCYC, 3.760; Morris Jones, *Gypsy Queen*, PYC, 3.810; Rodger M. Chown, *SSS Tradewinds*, 3.900.—Larry Barber.

47-Pound Fish Hits Jackpot in Astoria Salmon Derby

Winner of the Astoria Salmon Derby this year was Roy Bush of Tumwater, Washington, who took the \$1100 in top prizes offered for his 47-pound, 6¼-ounce salmon. Second prize winner was George C. Backlund of Astoria who was a close second with a 46-pound, 6-ounce fish.

This year the derby drew more people than any previous derby, with fully 50,000 attending during the six days of the contest, according to Al Hetzel, Astoria Chamber of Commerce secretary.

"Fishing was the best for the sports in any year for the last 15 years," he said. "We could see thousands of big Chinooks swimming almost on top of the water during the Derby, the fish were high which bore out the catches of almost all fish being taken with a minimum weight of lead, in most cases 2 ounces up to 8 ounces."



Frank H. Koehler, president of CRYA, presents trophies to Stuart W. Ball, winner of annual predicted log race at Portland. Others in group, beginning with third from left, are Dean B. Webster, race starter and timer; Art Randall, second place winner; George Riggs, race chairman; and Lew Rueppell, third place winner.—Larry Barber photo.



She carried the champion of 1950's Yellowtail Derby—the twin screw Graymarine powered 53-foot *Olde Ironsides* out of Point Loma, San Diego, was skippered by Chuck Chamberlain and brought Earl McCoy of Los Angeles to dock with his winning catch, a 29-pound, 14-ounce Yellowtail. The derby is the fourth for San Diego's Junior Chamber of Commerce. The classic began April 15 and was completed September 10.

Winning Yellowtail Taken Aboard "Olde Ironsides" in \$10,000 Fishing Derby

EARL McCoy, Los Angeles, a technician in the MGM studios, won the Fourth Annual San Diego Yellowtail Fishing Derby September 10 with a catch weighing 29 pounds, 14 ounces. McCoy, fishing from the *Olde Ironsides* skippered by genial Chuck Chamberlain, won a new 1950 Dodge Wayfarer sedan, first prize in the \$10,000 fishing contest sponsored by the Junior Chamber of Commerce.

C. K. Glasscock, 4098 Honeycutt Street, San Diego, took second place with a 24-pound, five-ounce Yellowtail and won a 14-foot Huntline Fibreglas boat and 25-hp Mercury Motor. Third place honors were won by W. H. Perrine, 425 E. 5th Street, Escondido, whose 24-pound, one-ounce catch won him a 12-foot Admiral Campster trailer.

A crowd of several hundred persons welcomed the 400 Derby contestants as their boats docked from the fishing grounds at the Coronado Islands and cheered the winners at the prize ceremony.

Special trophies awarded went to Chuck Chamberlain as skipper of the boat in which the winning Yellowtail was caught. He also accepted the trophy given each year to the crew of the winning boat. Russ Segel received a trophy for the smallest Yellowtail weighed in on the Derby Days. Each of the 400 contestants taking part on Derby Days received small prizes.

Robert F. Chadwick, chairman of the 1950 Yellowtail Derby, announced at the prize ceremony that the San Diego Junior Chamber of Commerce would again sponsor a Yellowtail Derby in 1951. He said that the Derby next year would have

an earlier starting date than this year's classic, which was April 15, and that the Derby Days probably would be scheduled sometime in July.

Lake Merritt Sees Five New Championships

Five new national champions were crowned following a highly successful Lake Merritt Championship Regatta September 9. The American Power Boat Association-sanctioned event was staged by the Oakland Junior Chamber of Commerce.

New champions are Dr. L. J. Novotny, Los Angeles, in the Pacific One Design Hydroplane Class, scoring 800 points and averaging 45.77 mph in his *Cherub II*; Pete Coffee, Los Banos, in the B Racing Runabout Class, scoring 800 points and a speed of 46.29 mph in his *Vina Mae III*; Bill Connolly, Alameda, in the Cracker Box Class, scoring 800 points and a speed of 52.41 in the

Miss Beverly; Margan Keaton, Berkeley, in the E Racing Runabout Class, scoring 800 points and a speed of 51.31 in the *Miss Irene*, and Richard Hallett, Downey, in the 135-Cubic-Inch Hydroplane Class, 750 points and a speed of 61.2 mph.

Other class winners were George Mattucci of Oakland, driving the *Californian* in the 225-Cubic-Inch Class for 800 points and a speed of 58.97 mph, and Everett Booth of Modesto, driving *Sharks* in the Service Runabout Class for 800 points and an average speed of 40.46 mph.

First heats were unspectacular, but the second heats found the water kicking up on the north turn, resulting in five boats losing their crews. An estimated crowd of 20,000 lined the shores of Lake Merritt regatta.—Paul Tracy.

Amorita Wins Tri-Island Series

The tri-island series, one of the biggest sailing events in Puget Sound, was won this year by Carl Jensen's *Amorita*, which nosed out Dolph Zubick's *Cholita* by only a half a point, 66½ to 66.

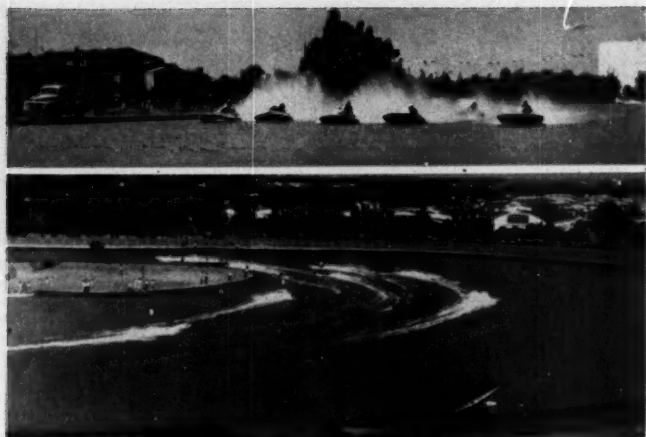
The Vashon Island race, run the weekend of September 16-17, ended the series with Franklin Eddy's *Dorade* taking first place, but placing third in the series with 65¼ points. *Amorita* won the Protection Island race earlier in the year, and *Alatola* won the Hat Island race.

Sinkey Wins Seattle Outboard Marathon on Lake Washington

Winner of the 100-mile outboard marathon on Lake Washington September 18 was 16-year-old Robert Sinkey. He drove his Class F boat in racing competition for the first time in the event sponsored by the Seattle Outboard Association. Second was Harold Jensen, Tacoma, in B Utility, Division II, and third was Bob Jacobson, Seattle, E Utility.



The 225-Cubic-Inch Hydroplane event was won by *Californian*, third from left in the Lake Merritt National Championship Regatta.



They're off! The hydros sweep under the starting line at the California State Fair, paced by the truck at the right. Lower photo shows the scramble on the first curve after the start.

Inboards Try Out Unique Racing Moat

By Clyde J. Gorman

CALIFORNIANS tried something new by way of a Sunday program at their State Fair at Sacramento this year, as inboards churned up the new water course in front of the grandstand. And California's second hundred years was off to a splashing start.

Built just inside the horse track, the new course is five-eighths of a mile in length, measured down the middle. Straightaways are 100 feet wide, and the turns 250 feet. Bottom depth is five feet. The island, some 25,000,000 gallons of it, is supplied from a deep well on the Fair Grounds. The island created by the course makes an ideal place to accommodate the boats, and what's more, by being in full view of the grandstand, the crowd can watch the pitt crews struggle with their cranky engines.

Results of the inboard racing on September 10 are as follows:

Pacific One Design Hydroplanes: 1. *Outlaw*, Charles Higgenbotham, Venice; 2. *Hurricane*, Harold Cain, Turlock; 3. *Cherub II*, Dr. L. J. Novotny, Los Angeles.

B Racing Runabout: 1. *Vina Mae III*, Pete Coffee, Los Banos; 2. *Falcon II*, Albert Serpa, Los Banos. 3. *Little Ceaser*, Ed Yoell, Oakland.

Cracker Box: 1. *Bouncy Barby*, Ed Brown, Sacramento; 2. *Miss Beverly III*, Bill Connelly, Sacramento.

E Racing Runabout: 1. *Miss Irene*, Morgan Keaton, Berkeley; 2. *Honey Bee*, Ed Olson, Long Beach; 3. *Sic'em*, Art Sherman, San Pablo.

135 Cubic Inch: 1. *Ranger*, Kenny

Ingram, El Monte; 2. *Scalawag*, Roy Skaggs, Long Beach. 3. *Skippy*, John Corea, Dos Palos.

Mistress and Grey Goose Victors in Annual Windjammers Race

Aldo Alessio, master of the Farallone clipper *Mistress*, emerged from the 13th annual Windjammer's race from San Francisco to Santa Cruz as a three-time consecutive winner this year.

He sailed his craft from the St. Francis Yacht Club to the Beach City in an elapsed time of 16 hours, 31 minutes. However, Harold Zook, Elkhorn Yacht Club, with his *Grey Goose*, former San Francisco Bay challenge cup victor, took first place with a 2:48:21 handicap.

There were 38 starters but light winds and an extremely heavy fog at sea thinned out the finishers.

Others in the first five, to finish under corrected time were: *Nepenthe*, *Holganza* and *Tasco*.

Smales Wins Times Trophy Race

Fred Smales, California Division manager for United States Plywood Corp., won the historic Times Trophy Race with his PC, *Pamlin*. Smales is commodore of the Balboa Yacht Club and the race was sponsored by the Los Angeles Yacht Club. The event was held over the Labor Day weekend.

The 47-year-old race was around Catalina Island, a 32-mile course which *Pamlin* took in six hours, 55 minutes, 8 seconds, elapsed time. Dan Thompson's *Happy Days*, winner in 1949, was defending champion.

I. P. B. A. Delegates Reverse Start of International Races

FOR the first time in its history, the International Cruiser Race will be run in 1951 from Canada to Seattle. This reversal in the traditional race was announced at the International Power Boat Association's meeting in Everett September 16.

The change was made in order to bring the finish of the race into Seattle's harbor as a part of the Sea-fair planned next year.

A bid for the start of the race has been made by the Burrard Yacht Club of Vancouver, B. C. Selection of the starting place will not be officially decided until the next meeting of the association.

The race to Alaska will also be run next year. Ray Hart of Bremerton, chairman of this event, said that it will be run separately from the other race and earlier in the summer.

New I. P. B. A. president is Frank Walters of Tacoma Yacht Club. Russell Rathbone of Queen City Yacht Club is vice-president. George Ross, Queen City Yacht Club, is secretary, and Roy Palm of Seattle's Rainier Yacht Club is treasurer.

Whim, Sparkle, Weinie Bake Win California Races

A feminine skipper in her Rhodes sloop *Whim* won the Myer Trophy in the cross-channel sailing race, September 24, Newport-Avalon-Newport. In her first year of competition, Mary Ann Pearcy, Newport Harbor Yacht Club, placed second in the contest on September 23 and first in the class September 24. Commodore Fred Smales of the Balboa Yacht Club successfully defended the George Strom trophy, with his PC *Pamlin*.

The sloop *Sparkle* defeated 12 of Southern California's finest yachts to win the 85-mile Santa Barbara island race, September 17. The Cabrillo Beach Yacht Club entry was piloted by owner Alex Irving. In this race for the first time was the new *Rocking Chair II*, owned by Willis Boyd.

A Lehman dinghy by the name of *Weinie Bake* won the first "world series" for a 28-boat fleet of sporty Lehman Inter Club dinghies, Newport Bay, September 17. She was sailed to win by Darby Metcalf of the Balboa Yacht Club.

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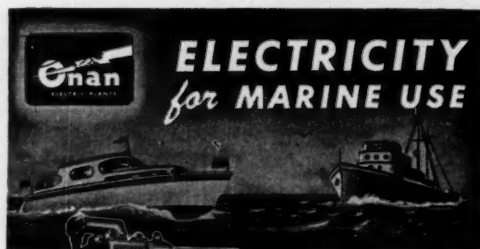
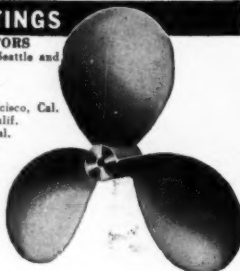


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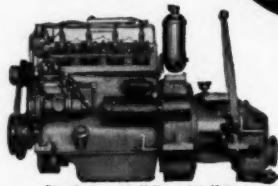
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On the Practical Side...

How Variable Rudder Control Was Installed in *Slo-Mo-Shun*

Ted Jones, designer, and Anchor Jensen, builder of Seattle Chrysler dealer Stanley S. Sayres' *Slo-Mo-Shun IV*, solved one requirement—that of variable rudder control—in a simple fashion, working with Western Gear Works.

The design had to provide for:

1. High ratio control for maximum steering stability at extreme high speed on the straightaway runs during which the boat set the world's record of 160 miles per hour with Sayres driving.

2. Low ratio control for fast steering on the hairpin turns of the Gold Cup race which *Slo-Mo-Shun IV* won.

3. Intermediate control ratios for other conditions.

The solution worked out was to use a standard Michigan Tool Company Cone-Drive double enveloping gear speed reducer mounted outboard at the stern. As shown in the accompanying sketch the pinion in the reducer is linked to the steering column through a 10-foot long tubular shaft drive with two universal joints and a set of one-to-one ratio bevel gears, while the gear shaft is inserted directly into one of the splined rudder posts.

With this design, it was possible to:

1. Change the reduction ratio to the rudder at will, simply by interchanging standard Cone-Drive gear sets of the same center distance but having different ratios within the reducer housing.

2. Simplify the shifting of rudder

location, since everything is outboard.

3. Enable the optional use of either one or two rudders (pitman arms connected by a link are mounted on the rudder posts.)

4. Eliminate practically all backlash and lost motion with a solid drive from wheel to rudder (no pulleys or cables).

5. Reduce the weight of the drive since a Cone-Drive reducer of only 2-inch center distance was found capable of handling the tremendous torque loads imposed on the 4400-pound boat's rudder shaft by the Gold Cup race turns. (The double enveloping characteristics of Cone-Drive gears give these gears a much higher torque load capacity than conventional right angle drive gears.)

With this setup, a 10-to-1 ratio gear set was used in the Cone-Drive reducer to control the rudder while the boat was setting the world's record of 160.3 mph.

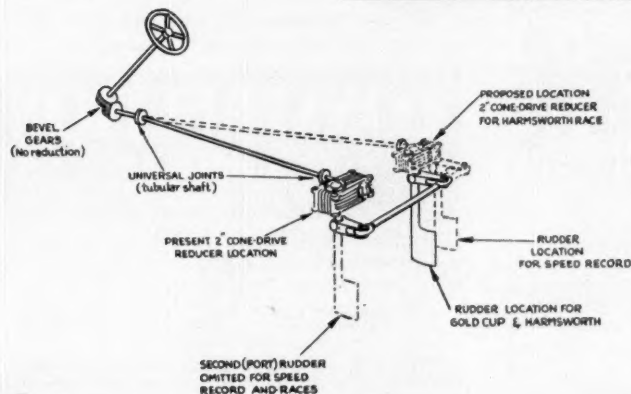
For the Gold Cup race, a 5-to-1 reduction gear set was used, the speed reducer gears being simply interchanged to provide the different ratio.

Included in the steering setups used with this drive to date on the *Slo-Mo-Shun IV* are:

1. A single rudder directly behind the screw.

2. Two rudders linked together and placed on either side of the screw.

PMB readers are invited to send in their favorite nautical gadget ideas. If necessary to illustrate, sketches or photos should be submitted. Payment will be made upon publication.



3. A single starboard rudder 12 inches to the right of centerline, used to set the world's record in Seattle, Washington, recently, and

4. A single rudder 7 inches to the right of centerline, used to win the Gold Cup race in Detroit, July 22.

Aluminum Roofed Boathouse

To my knowledge, this is the only quonset-type aluminum roofed floating boathouse in British Columbia. Nearly in every respect, it answers the average boat-owner's dream for an inexpensive, easily constructed, light but strong, year-around cover for his boat. With materials on hand this boathouse can be erected in less than a week and costing under \$400.00 (in B.C.). No



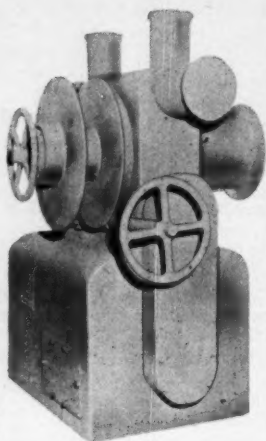
special skill is required. Although one person can do the job, two would be ideal.

Two pairs of 32-foot cedar logs are used as floats. A simple X-frame of rough 3 by 6-inch timbers at the closed end hold the logs together. The house measures 28 feet long. It is 10 feet wide and 7 feet high at water level. The one closed end contains a plastic screened window 5 by 3½ feet. The open end is securely bridged by a steel arc (5 by ½ inches) fashioned out of boiler plate. These dimensions accommodate our 24-foot cruiser with ample walking space on all sides. Our boat is moored inside by four clips mounted on coiled springs attached to the bottom of the house. This allows the boat to ride freely (even during choppy weather) without touching any part of the boathouse.

Another feature is that the house may be dissembled even faster than it can be erected without damage to the materials. This is made possible by the use of light steel (1¼ by ¼ inches) roof arcs and braces and the use of galvanized bolts. Spaced every two feet, 1 by 3-foot lumber is bolted on to the arcs serving as a base for the aluminum roofing. This also prevents pitting of the aluminum when it comes in contact with steel. Very few nails were used. In fact, only two pounds of zinc-coated nails that secure the aluminum to the roof.—David B. Conover.

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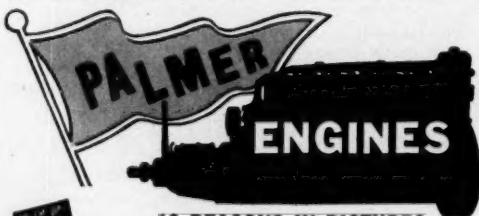
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VANCOUVER, B. C.

Among the Bread-Earners

with Scuttle Butt Pete

Piling Busters Story Contest Awards

ONE of the funniest tow boating stories of all time was entered for the impromptu Piling Busters Story Contest in Tacoma. The title was "The Time the Simon Foss Had Wheels." The writer, Capt. E. J. Stork of the *Simon Foss*, wrote his story with the skill of a master craftsman mingled with such bubbling salty humor as only a tow boat man could muster.

For his literary efforts, Captain Stork won first place in the tall tales division. He was awarded the genuine gold cup put up by the mayor of Tacoma, John Anderson.

The story contest originated in Tacoma last September when Jack Shipley of the *Silver Spray* and some of the tug boats talked it up over the air. The idea spread like wildfire, for the tow boat men have been itching for years to get some of their stories out of their systems. In the short time that the contest was open, there were about 50 stories submitted by 35 contestants.

The prizes that were put up as awards were lavish. Originally, Shipley had in mind to put up a ham and a couple of slabs of bacon. But some Puget Sound yachtsmen and businessmen who had a soft spot in their hearts for the tow boat men put up a total of about 30 prizes, so the contestant who didn't receive something was unlucky indeed.

The awards were presented October 6 at the Top of the Ocean, a Tacoma waterfront restaurant and club. The Tacoma Athletic Commission put on the cocktail party

and dinner for the contestants. Frank Heffernan, Tacoma yachtsman, invited the wives of the contestants to be his guests for dinner.

Immediately following the dinner the prizes were awarded. Shipley acted as master of ceremonies, and introduced Henry Foss as "Mr. Tow Boat himself," who presented each of the winners with his prize. It was announced that printed stories would be available at a later date. Possibility of another story contest was announced.

Now for the other top winners. Second prize in the tall tales contest, a barometer presented by Art Lundgren of the *Lundee*, went to Harry Laviguer of the *Iver Foss*. Third prize, a night on the town at the expense of Henry O. Foss, went to John A. Cowan of the *Favorite*.

In the comical true story division, winner was Capt. Walter (Yobby) Torgesen of the *Crosmor*, who took home a case of Duggins Dew. Capt. David Livingston of the *Arlen Nelson* won an electric clock, presented by Buford L. Parpon of the *Terron II*. Third was W. O. Thaine of the *Anne W.*, winner of a radio from Northwest Radio.

For the best story on a sharp piece of tow boating, Capt. M. F. Galligan of the *Louise II*, won the Seth Thomas clock put up by the Foss Launch & Tug Co. Elmer Edwards of the *Carl Foss* won the driftwood lamp presented by Capt. Galligan. Walt Nelson of the *Anne W.* won the original ham put up by Shipley.

Only two cartoons were submitted, both very good, with awards



Here is A. S. "Tony" Busalacchi, Stockton's waterborne postman mentioned last month in this column. In the top photo he is heading down a slough on his route at the wheel of his new Ladd-Built 19-foot work boat. The craft is powered with a 45-hp Universal engine. The craft has a top speed of 22 mph but will cruise at about 18 mph. The lower photo shows Busalacchi making a "delivery" to a house boat.

going to Capt. Galligan and to Terry Still of the *Service*.

Here are the names of the other contestants who entered the contest: Arnold Ader, Ross Cowan of the *Fawn*, Bill Duffy, M. Flynn, Francis A. Forester of the *Mary D. Hume*, C. A. Foss, Boyd, Albe, L. A., and Pat Galligan, Capt. Homer Grant of the *Virginia*, E. M. Hanson, G. R. Hopkins, Jack Houtz of the *Simon Foss*, A. N. Huntley of the *Carl Foss*, Floyd Jamieson of the *Irene*, Harry M. Manly, Ed McVicker and Everett McVicker of the *Carl Foss*, F. R. Miller, L. L. Riggs, Henry Schon, Sr., Foss No. 12, J. Thomas Sadler of the *Crosmor*, A. N. Togeson of the *Madrona*, A. Wickstrom of the *Peter Foss*, and Dick Yost.

The Flying Gillnetter . . .

Creating quite a stir among pike-pole pushers of the Columbia River is the 31-foot gillnetter owned and operated by A. W. "Art" Anderson of Skamokawa, Washington. Anderson is a fish buyer for New England Fish Company, Astoria, but has devoted much of his time recently to operating his speedy craft as a tug, moving log rafts and a pile driver in the Columbia.

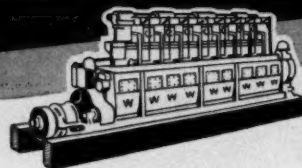
The gillnetter-tug was built in 1944 by Tom Driscoll and is now equipped with its third engine, a Nordberg Model 340 with a 2.44-to-



The flying gillnetter-tug, operated on the Columbia by A. W. "Art" Anderson, is Nordberg powered.

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Second tug, like "SUSAN H," to have Washington diesel

Three years of steady, satisfactory performance has made the "Susan H" an outstanding success in log-towing service. The trim, sturdy vessel, designed and built by Prothero Boat Co., Seattle, is owned by Boyer Halvorsen, Port Madison, and powered with a 6-cyl., 260 hp Washington diesel.

The same dependable engine was first choice again, when this yard was commissioned to build a new 64-foot towing vessel on the same lines as the "Susan H" by Pope & Talbot, pioneer logging and lumber operators.

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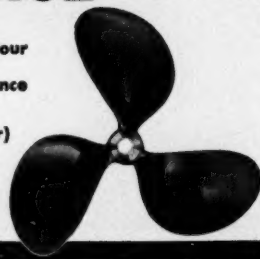
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Standard No. 3 is one of the first tugs to carry radar for work on Puget Sound. Capt. George T. Sorensen (left) and Capt. T. G. Agren are shown in the pilothouse, where the scope is mounted. The scope is 7 inches with a magnifying glass, shows a 11-inch picture. Ranges are 1, 2, 8, and 20 miles. This model, CR-103, Radiomarine Corp. of America, is compact, and is intended for use by small boats maneuvering to docks and in narrow channels.

1 reduction gear. The Nordberg is rated at 135-hp at 3000 rpm and replaces an engine rated at 155 hp. It has proven so fast on the river that it is reported to have been seriously handicapped in gillnetter races and finally barred completely. "Art," who has spent some 62 years on the river, states that he considers that his boat piles up an equivalent of 120,000 miles a year, when compared to a truck of equal size.

From B.C.'s Salt Chuck

One of British Columbia's most colorful towboat skippers, Capt. Sig Salveson, well known to the logging, fishing and pulp mill people of the Pacific coast, retired recently from his post with Badwater Towing Co., subsidiary of Pacific Mills, Ltd.

Capt. Salveson had been with Badwater Towing Co. for the past eighteen years, latterly as skipper of the big deepwater towboat *Sudbury*, and when he finally "swallowed the anchor" it was on the decks of the *Sudbury* that the good-bye ceremony was held, O. D. Hallin, vice-president and manager of Pacific Mills timber department acting as master of ceremonies.

The picturesque, pipe-smoking Norwegian was one of the last of the west coasters who came around the Horn to work his way up in the Northwest. He was in his teens when he first went to sea 60 years ago. He came to this coast on a windjammer and in the early days of the halibut industry he was a high-liner for Canadian Fishing Co.

The Haida Indians of the Queen Charlottes had a name for Capt. Salveson—"He who can smell the weather." Actually he had an un-

canny knack of forecasting, and this was a valuable asset when he went into towboating in Hecate Strait. As master of *Sudbury* he often towed rafts across open water comprising more than 3,250,000 board feet.

"You've got to have experience to do a job like that," said Capt. Salveson. Now he figures he has had enough; he's looking forward to a long spell ashore.

No Fears of Blizzards Now . . .

There's a new radar set on *Standard No. 3*. She's the 97-foot steel tug that Standard Oil Company of California operates out of Point Wells, hauling the 14,000-barrel oil barge, No. 15, to all points around Puget Sound.

Decision to install the radar was taken following the January 13 blizzard, probably at the insistence of her veteran skippers, Capt. George T. Sorensen and Capt. T. G.

Agren. For it was on that grim Friday 13 that Captain Sorensen went through his most harrowing experience in his 35 years on the Sound.

"It was blowing when we left Point Wells with the No. 15 for points up the Sound," he recalls. "Not too bad, but when we were half way to West Point the blizzard closed in on us. It was worse than the blizzard of '23.

"Of course we couldn't see anything. We soon lost contact with our barge. Sometimes we'd see something looming up ahead of us and we'd find it would be our own barge.

"We were out in the Sound six hours, and for the most part we didn't know where we were except that we were somewhere between Seattle and Tacoma. Finally we appealed for radar aid, but there were no vessels out in the storm with radar. So we had to continue drifting southward under the battering of the icy waves.

"When we were all iced down a shore loomed up ahead of us, and we dropped our hook in the middle of Portage Bay on Vashon Island. It was so cold that I couldn't bend my finger to ring the bell and the crew were as bad off as I was.

"With radar fogs and bad weather will be no problem now, and we'll be able to keep on schedule, which will be appreciated by the people in the islands who are dependent upon our oil for heating."

The radar installed is a new model developed by Radiomarine Corp. of America for small boats and close navigation. Capt. Sorensen said that with their radar they can see ships docking on the other side of the 50-foot dock at Point Wells where they lay.



Capt. Sig Salveson

Seattle Boat Show Set for March 31 To April 7 in University Pavilion

Seattle's huge University of Washington Pavilion will be the scene of Northwest Marine Industries Fourth Annual Pacific Northwest Boat Show, March 31 to April 7, 1951, Moore McKinley, 1951 boat show chairman, has announced.

The dates announced place the Pacific Northwest Boat Show a month later than in the past three years, bringing the event closer to the actual opening of the buying season. The new site not only offers 30 per cent more exhibition space than in the past, but has far more convenient parking and spectator facilities.

McKinley, president of Fremont Electric Co. in Seattle, stated that, although space rates for the show had not definitely been set, it was expected they would be about on a par with those charged in 1950.

The University of Washington Pavilion has ample facilities for handling large boats and supplies, and has entrance doors capable of allowing passage for the largest boats.

Full details of the 1951 Pacific

Winning model of the 1950 Boat Show, the *Columbia*, built by Ross Mathis of Deming, Wash. Here Ed Monk, model contest chairman, points out one of the good features of the boat.



Northwest Boat Show may be obtained by writing McKinley in care of Northwest Marine Industries, Inc., 714 American Building, Seattle, Washington.

A boat show model contest will again be held this year, Ed Monk, who has been in charge of previous contests, has announced. As a special feature this year, there will be special prizes for the best model of *Slo-Mo-Shun IV*, Stanley S. Sayres' Gold Cup and Harmsworth trophies winner and fastest speed boat of all time.

Working plans for making the model are being drawn and are available through Edwin Monk, na-

val architects, 1500 Westlake N., Seattle 9, Wash., he announced. This special contest is open to young persons up to 18 years of age only.

More than \$800 in prizes will be awarded to 27 winning contestants.

San Francisco Yacht Club

Another San Francisco Bay race was capped by Aldo Alessio and his Farallone clipper *Mistress*, when he took the San Francisco Yacht Club's 45.9-mile 13th annual Midnight, Moonlight Maritime Marathon, in an elapsed time of eight hours, 15 minutes.

Other winners were *Miyot* and *Mon Ami*.

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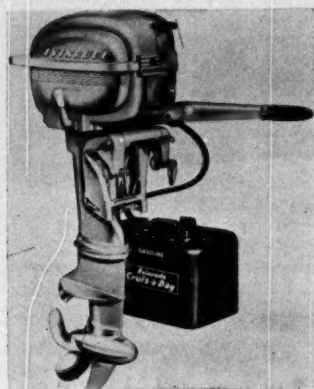
Marine Products

"Big Twin" Evinrude Develops 25 Horsepower, Weighs 85 Pounds.

A new 25-hp two-cylinder outboard motor, the "Big Twin," weighing only 85 pounds, has been announced by Evinrude Motors as the most important addition to their line of outboard motors for 1951.

"This motor has the lowest power-weight ratio in the entire outboard field," stated W. J. Webb, Evinrude director of sales.

Other features include gearshift control in neutral and reverse.



Spark and throttle are synchronized with a twist-grip control. It has the Simplex Starter and the separate Cruise-a-Day tank, features of smaller Evinrude motors. It will throttle smoothly down to normal trolling speed.

Its 25 hp is developed at 4000 rpm. The powerhead of the new model is twin cylinder, alternate firing type. Displacement is 35.7 cubic inches.

Pettit Paint Company Announces Three New Marine Products

Tropicop, a new bright red, super anti-fouling copper bottom paint, ready mixed for use without special solvents, thinners, or undercoaters, has been announced by the Pettit Paint Company of Belleville, New Jersey.

The company states that after exhaustive, comparative 4-year tests in all parts of the country, including heavy fouling southern waters, Tropicop offers absolute protection against barnacles, grass, worms and

all forms of parasites. Tropicop brushes out easily, dries quickly, resulting in a good, smooth semi-hard finish that wears away during the season. It sands easily, ready for the next season's coat with a minimum of work, and will not check or crack.

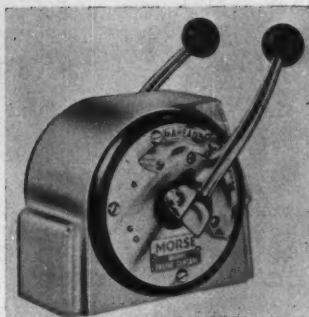
Alvar-Spar varnish, also recently introduced by the Pettit Paint Company, after many years of intensive research, has been specially developed to resist the damaging ultraviolet rays of the sun. It features a pale, clear finish that brushes on easily and is self-leveling. The Pettit Paint Company recommends it for surfaces constantly exposed to the sun.

A new marine specialty, Pettit Marine Glue, is now being offered by the Pettit Paint Company. It is a liquid which never gets hard or brittle, remains elastic and is easy to apply. Recommended for double planking, batten seam construction and other similar marine purposes.

Morse Marine Engine Control Now Available For Larger Craft

The Morse Instrument Co., Hudson, Ohio, is now manufacturing the new Morse mechanical pilot house control unit for twin diesel installations with hydraulic reverse gear.

Control head of this new unit, like other models of Morse engine controls, is all mechanical and features single lever operation of each engine. Both clutch and governor con-



trol are combined in the single lever for maximum maneuverability and simplicity of operation.

The Morse engine control line now includes single lever controls for either single or twin installations of gasoline and diesel power from single or dual stations.

How to Use Waterproof Glue Described in Borden Booklet

A new folder describing "Casco-phen," a liquid resorcinol resin, is being offered to the trade by the Borden Company's Chemical Division. The adhesive is the only type of cold-setting wood glue that meets the newest military specifications for waterproof, boil-proof bonds. It also enables the amateur to make completely waterproof and weather-proof bonds for boat-building, outdoor furniture and other critical wood gluing. The Casco-phen folder contains both household and production gluing instructions. It is available on written request to The Borden Company, Chemical Division, Dept. PR, 350 Madison Avenue, New York 17, N. Y.



This new 1951 Chris-Craft Commander features a new modified clipper bow design, spacious aft cockpit and sleeping accommodations for six. It has a complete ship's galley and dinette, stateroom with twin berths forward and two toilet compartments. Power options are twin 130-hp engines to twin 160-hp with top speed approximately 25 mph.

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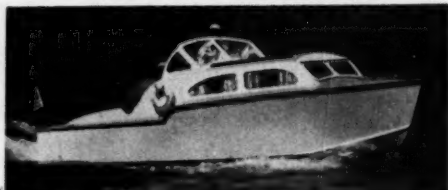
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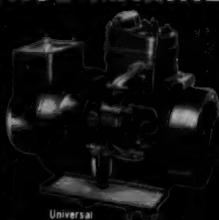
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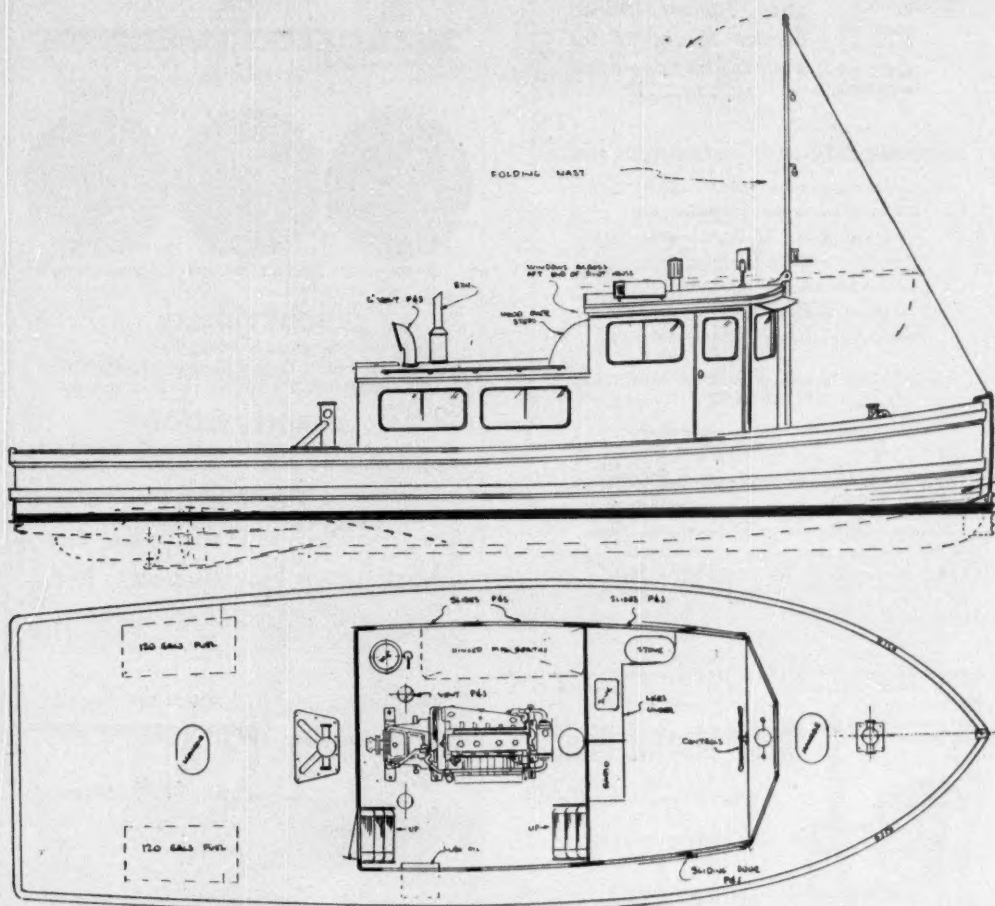
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Prince Rupert, Vancouver, Victoria—Edward Lipsett, Ltd.

Tunnel-Stern Tug for Fraser River



FOR USE against the swift current of the Fraser River, Jack Johnson of the Canyon River Towing Company, Hope, B. C., has a new tunnel stern river tug, the *Canyon II*. The lines are shown on the accompanying design by Ed Monk and Lorne Garden, Seattle naval architects.

The tug is now in service on the Fraser River. She has been found to have ample reserve speed while running light upstream, which was one of the owner's requirements.

Overall dimensions are 36 feet L. O. A., 12 feet beam, and 26 inches draft. The *Canyon II* is of wooden construction with a steel tunnel and a folding mast. Power is a 200-hp General Motors diesel with 1½-to-1 reduction.

Her specifications reveal light construction for a tow boat, but she

has been adequately braced to stand required loads. Topside planking is ¾-inch Alaska cedar, and bottom planking is 1-inch Alaska cedar. The main sawn frames are 1×3-inch oak on 18-inch centers. Intermediate frames are 1¼×1¼-inch oak.

The topsides below the guard are sheathed with ½-inch ironbark. Closely-spaced, heavily-sponsoned guards protect the topsides.

She is intended for use as a day boat, but there are hinged berths in the engine room for emergency use.

C. E. Raabe Heads Yacht Club Heart Campaign

The second annual campaign to raise more than \$100,000 for the American Heart Association is winding up its second successful season in the nation's 1,000 yacht

clubs, it was announced by C. E. Raabe, chairman of the National Yacht Club Committee.

The campaign, which is being sponsored by the commodores of leading yacht clubs in ten regional districts scattered throughout the country is attempting to reach all persons interested in or participating in boating.

Clubs everywhere are being called upon to sponsor a local Heart Fund charity event, including the running of regattas, boat races, clambakes, dances and similar fund raising events. Mr. Raabe, who is president of the Woolsey Paint Company, will personally guide these activities in each area.

The National Yacht Club Committee has already turned over to the Heart Fund a sizable contribution as a result of last year's drive.



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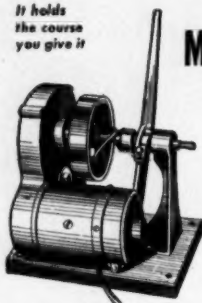
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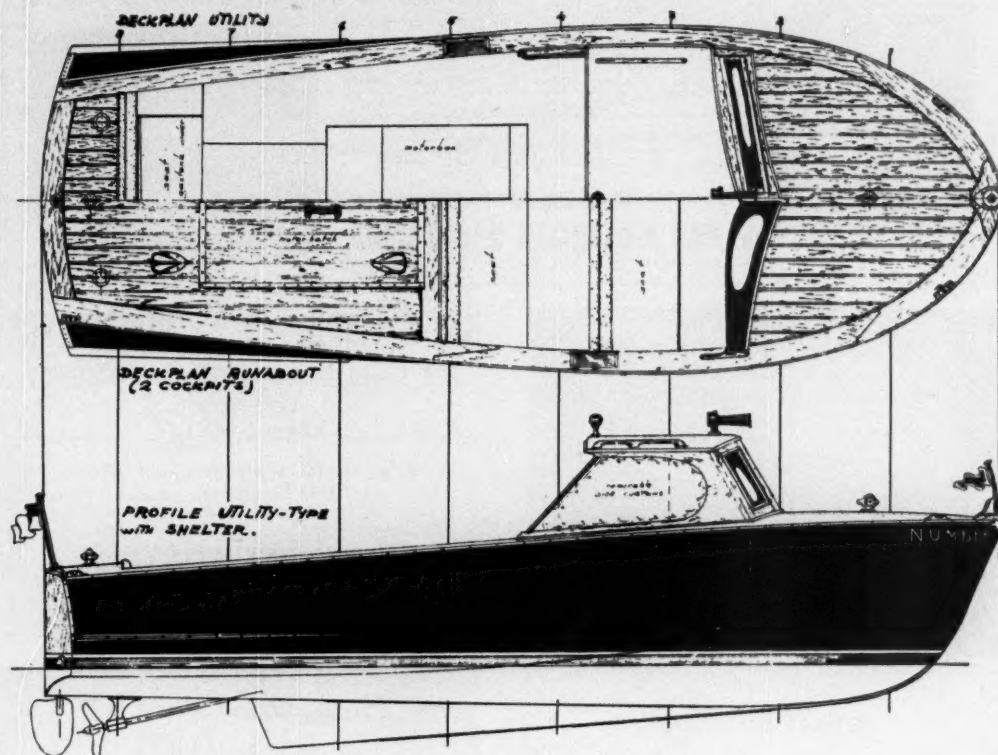
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Fast Runabout from San Francisco Bay



A NEW stock 17½-foot runabout has been developed by J. P. "Phil" Hartog, naval architect and owner of the Holland Boat Works, Old Bayshore Highway, Burlingame, Calif.

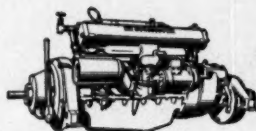
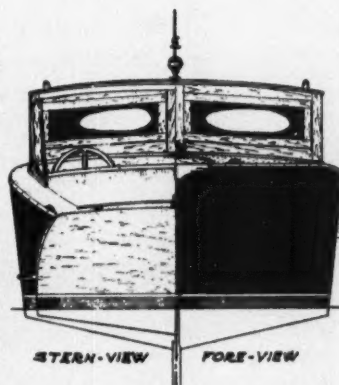
The craft will make speeds up to 40 mph with a Ford V8 conversion or similar engine. There are two different deck plans. One a conventional type runabout with two cockpits forward. The other is a utility type with or without a small shelter.

Special attention has been given by Hartog to the dimensions of the cockpit, which are deep, roomy and give space for three people each.

Construction of the runabout is of 3/8-inch marine plywood, bottom and sides, with mahogany or oak frames, and backbone. Mahogany plywood decks and mahogany covering boards and shelter are shown on the accompanying plan.

Dimensions are: length overall, 17 feet, 7 inches; beam 6 feet, 1 inch; freeboard fore, 2 feet, 6 inches; depth, 2 feet, 11 inches; and draft extreme, 1 foot, 8 inches; weight empty, 1550 pounds.

Hartog states that plans are available from him, and that knock down kits will soon be ready for the market.



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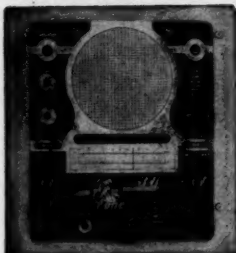
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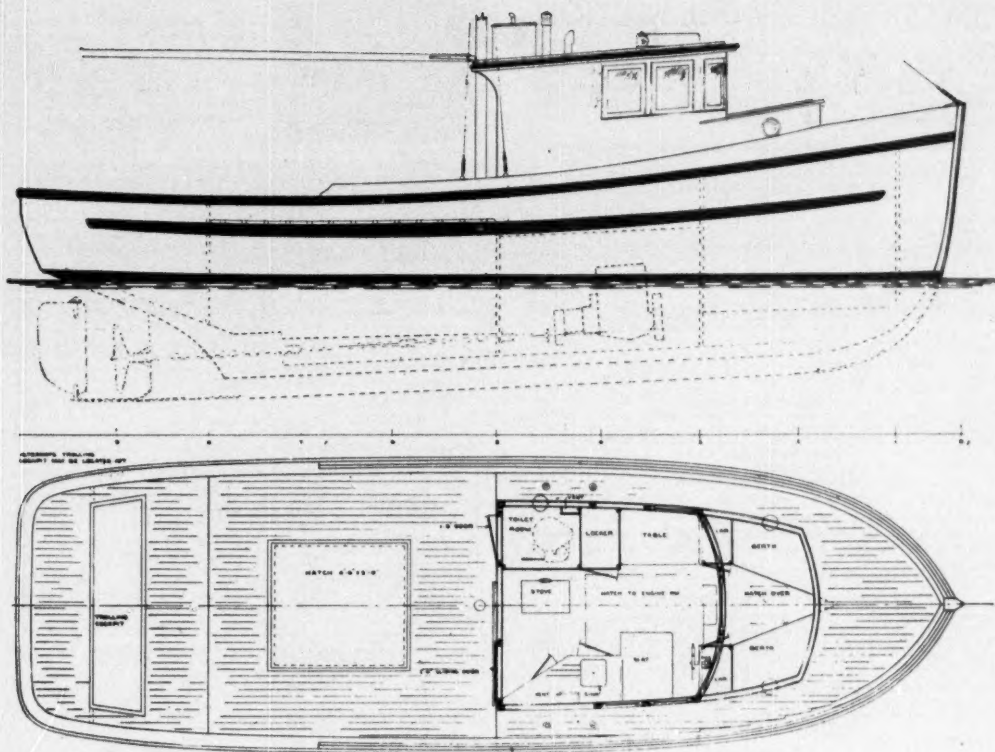
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36-Foot Troller with Seiner Stern

THIS TROLLER, 36 feet overall and 10 feet 10 inches beam, was designed for Turnbull Roofing of Vancouver, B. C. Good accommodations, maximum load capacity, and sea-keeping qualities were the aims of this design by John Brandlmayr, Vancouver, B. C., naval architect.

The round bottom hull is typical of modern trollers with flared topsides forward and a seiner type stern. Draft light is 4 feet. With a nine-ton load the draft is 5½ feet.

Construction is fir timbering with bent oak frames 1½ inches by 2½ inches on 10-inch centers. Planking is 1¼-inch fir.

Messrs. Turnbull intend to power their boat with 30 hp at 1200 rpm

Ailsa Craig diesels with 2-to-1 reduction gear. There is sufficient space in the engine room for a slightly bulkier diesel or gasoline engine as large as the Chrysler Royal with reduction gear. She carries two 100-gallon fuel tanks and one 30-gallon water tank.

Accommodations are unusually spacious and airy on this boat. Galley and w. c. are located in the pilot house with two berths and hanging lockers below.

Pacific Marine Supply Named Snow-Nabstedt Gear Distributor

The Snow-Nabstedt Gear Corporation has announced the appointment of the Pacific Marine

Supply Company, Seattle, as distributors for S-N and Joes reverse and reduction gears effective October 1.

The appointment of this new distributor will provide for better service, larger stocks of gears and parts and better coverage of a large territory, according to the company.

Pacific Marine Supply, pioneer marine supply house, covers the greater part of the state of Washington and Alaska and will maintain its principal stocks of S-N gears and parts at its main store in Seattle. The company operates seven marine supply stores through the territory in addition to a large sales force in close contact with shipyards, marine supply houses and boat owners.

CHARLES E. SMITH

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Complete, less reverse gear
141 H.P.—8 cylinder

New engines less reverse gear, cheaper than overhauling your old engine.	\$550.00
Direct drive	750.00
2 to 1 reduction	950.00
2 1/2 to 1 reduction	950.00
3 to 1 reduction	950.00
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LCM's 50x14 and 56x14 1/2 powered with 2 GM Diesels, in good running condition, suitable for freight, log salvage, fish packing shallow water operations, etc.	5,000.00
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New 24" Maple steering wheels, brass hub	25.00
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Murray Tregurtha, Chrysler powered, for barges, etc.	1,250.00
Sea Mule, Chrysler powered, complete unit	1,250.00
Featuring the Allen Automatic Pilot	\$285.00 and up

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Engines—NEW properly designed, carefully assembled and thoroughly tested like New Scripps make a whale of a difference in your comfort afloat.

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Heaters, boat, fluid type, Stewart-Warner No. 794 E 12 or 24 volt.	12.00
Blowers, engine room, explosion proof, 4" "Tradewind" 6-12 volt.	12.00
Pumps, bilge, hand, brass, bulkhead type, 1 1/2" outlet, new.	12.00
Cable, tiller, bronze, 6 x 19 5/16" .13 ft. 1/2", per ft.	.21
Cable, pulley, wood, single and double, good, 4" to 14"	\$1.00 to 5.00
Horn, electric, 6 volt, brass, new, 6" diaphragm	25.00
Clocks, boat, 8 day, bakelite and nickel brass, non strike	25.00
Binoculars, new, coated lens, 6-7-8 power, tax included.	\$36.00 to 51.00

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GOVERNMENT DEFENSE ORDERS can be obtained by small businessmen. Send \$1.00 for report telling how, where to bid for orders, contracts; subcontracting opportunities. Christopher Publications, Dept. GPM-1, Holtville, N.Y.

WANTED—Pre-war Hacker or GarWood mahogany planked runabout 20' to 27'. Must do better than 55 mph. Harry H. Daniel, 1427 N.E. Marine Drive, Portland 11, Oregon.

Completely rebuilt with new motor guarantee, G.M. 6-71, 225-hp. Gray Marine diesel engines, 1 1/2 to 1 reduction gear, large ports \$1875, small ports \$1825. Stockton Boat Works, 311 East Main St., Stockton, Calif.

FOR SALE: New, used and rebuilt marine motors, 2 to 500 hp, gasoline and diesel. Complete stock list of popular models. Write for FREE Catalog 150 covering conversion equipment, propellers, reverse gears, fittings and supplies of all kinds. STOKES MARINE SUPPLY, Dept. 11, Coldwater, Michigan.

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STOCK SIZES TO FIT OUTBOARDS-INBOARDS—Furnishes protection from Hot Sun, Rain or Spray, and is quickly lowered by releasing two strap fastenings. Folds flat either forward or backward when not in use and can be set up in a jiffy. Can be furnished with quick detachable front and side curtains fitted with plastic windows, all easily snapped on from inside the boat, even while under way. Write for circular. RUPERT'S 18405 Aurora Avenue Seattle, Washington

Engines which don't give your boat satisfactory performance should be replaced with New Scripps.

FREE PLASTICS MANUAL: Up to date information on handling, fabricating, drilling and forming plastic sheets. Ideal for windshields, port lights, hatch deck lights, etc. Write: Universal Plastics, Loman Bldg., Seattle.

FOR SALE: Used Motor—Gray Express Six-350—124 HP with 2.5:1 Reduction, Fresh Water Cooling and Propeller. \$2,068 now \$1,500. Marine Mart, E. 1517 Sprague, Spokane 15, Washington.

SEAPLANE, Beechcraft 5-place stagger wing, 450 HP. Just completely rebuilt at cost of \$5,500. Will take boat in trade. Price \$12,750. Harry H. Daniel, 1427 N. E. Marine Drive, Portland 11, Oregon.

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TRADE WINDS

Skilled hands at the helm of
west coast boating business
this month included . . .

★ **DAVID McNEILL**, Pacific Drydock Corp., North Vancouver, B. C., was named provisional chairman of the Naval Architects and Marine Engineers in British Columbia as plans for forming a branch in the west coast province are underway. British Columbians who attended the first meeting were Horace German, A. Robertson, Hans Ullstein, Alf J. Squires, R. F. Tully, Thornton Grenfell, Harry Warkman, Mac Wallace, Bruce Carmichael, H. Renwick and John Brandlmayr.

★ **O. H. (DOC) FREEMAN** has assumed sole ownership of the Seattle firm formerly known as Freeman and Gibson, located on Lake Union. The store will be known as Doc Freeman's. Much of the small marine hardware and fittings have been disposed of, and the firm will now specialize in the sale of new and used marine engines and larger items of marine equipment and supplies. Pete Knudsen and Bob Braas will continue with the firm.

★ **J. L. LOVETT**, Southern California manager for Submarine Signal Co. recently appeared on a television show, Channel 13, in Los Angeles in a show which featured the use of a depth recorder (a Fathometer, one a recorder, the other an indicator), in the bait-hauling business of the sport-fishing ports of Southern California. With Mr. Lovett was Al Dixon, son of the veteran bait hauler, Joe Dixon, fishing the "Maud I" out of Newport Beach.

★ **W. H. CURTIS** of Los Angeles cruised in Pacific Northwest waters during August in his 34-foot Chris-Craft. He is the head of the Curtis Pump Co. He was once a naval architect in Portland, Oregon. Later he was identified with the aircraft industry.

★ **JOHN H. LEE** has been elected president of the Puget Sound Tug & Barge Company to succeed the late Capt. Lindley Davis, who died last August. Lee went to work for the company several years ago as a dispatcher.

★ **CHARLES F. ADAMS, JR.**, president of Raytheon Manufacturing Company, has announced the appointment of Rear Admiral Roy M. W. Graham, USN (Ret.), as special assistant to the manager of the Equipment Sales Division. His office will be at 50 Broadway, New York 4. His duties will be in connection with harbor radar systems to facilitate the movement of ships within and in and out of ports during periods of low visibility.

★ **LOUIS B. TRUHER** and Donald I. Coney have joined the staff of the Crofton Diesel Engine Co., distributors for General Motors diesel engines in Southern California. The former, previously associated with Burke Crofton at San Diego, will work out of the southern port. Coney will cover the San Pedro territory, with headquarters at the San Pedro office of

the Crofton company. Truher was formerly associated with the Evans Engine and Equipment Co. of Seattle and the West Coast Engine & Equipment Co. of Berkeley. Coney comes to the Crofton enterprise from the service division of the General Motors Detroit Diesel Engine Division.

★ **JACK HICKMAN**, president of the Northwest Marine Industries, Inc., has announced the chairman of the 1951 Seattle Boat Show committee. Guy Williams is managing director; John MacNichol, Pacific Marine Supply, promotion; John Warren, Marina Mart, budget and finance; Ed Monk, model contest; Warren Wolfe, Associated Transfer, moving and procedure; Latham Goble, Bryant's Marina, chamber of commerce and service clubs; John Haydon, Port of Seattle, publicity; Mike Knox, Washington Boat Center, contracts; Lorne Garden, show layout.

★ **ED HARRISON** has recently been promoted to Engine Sales at Gunderson Bros., Engineering Corporation, Portland office. Harrison previously was in the Engineering Department. His background includes training at the Oregon Institute of Technology, specializing in automotive and diesel engines, and service in the Army Ordnance Department and the Ordnance Schools at Aberdeen, Maryland.

★ **FRANK and JOHN VILICICH**, both commercial fishermen, have opened the Marshall Boat Works, at Marshall, Calif., on Tomales Bay. They have a marine ways and a marine service station. They will sell Chrysler marine engines, marine hardware and American Marine paints.

★ **KEN ENOCHSON** and **MIKE KNOX**, associates in the Washington Boat Center of Seattle and Russ Gibson, former partner in Freeman and Gibson, announce that they have formed a new marketing organization to be known as the "Marine Bargain Center" which will be operated from the north wing of the present sales rooms of the Washington Boat Center at the north end of the University Bridge. In addition there will be a Bargain Loft which will handle surplus and used boat equipment. All of the lighter weight small boat equipment of Freeman & Gibson has been taken over and these stocks have been supplemented by new lines and also by the small boat equipment formerly handled by the Ship Equipment & Supply Co. of Seattle which the new firm has recently purchased. The Bargain Center Store will be managed by Dick Ballinger. The brokerage, boat-building and moorage business of the Washington Boat Center will continue operation as a separate unit under the management of Knox and Enochson.



Jerry Bryant, right, president of Bryant's Marina, Seattle, Evinrude distributor, and George Mikkelsen of Olaf Mikkelsen Motor Company, New York Evinrude distributor, demonstrate the new 25-hp Evinrude Big Twin outboard motor on the Milwaukee River in conjunction with the Evinrude sales conference held in Milwaukee September 18-22.

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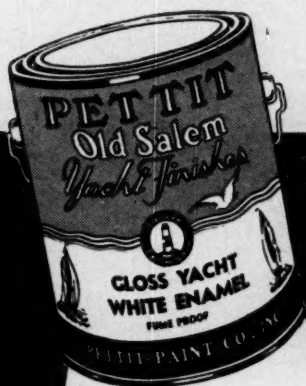
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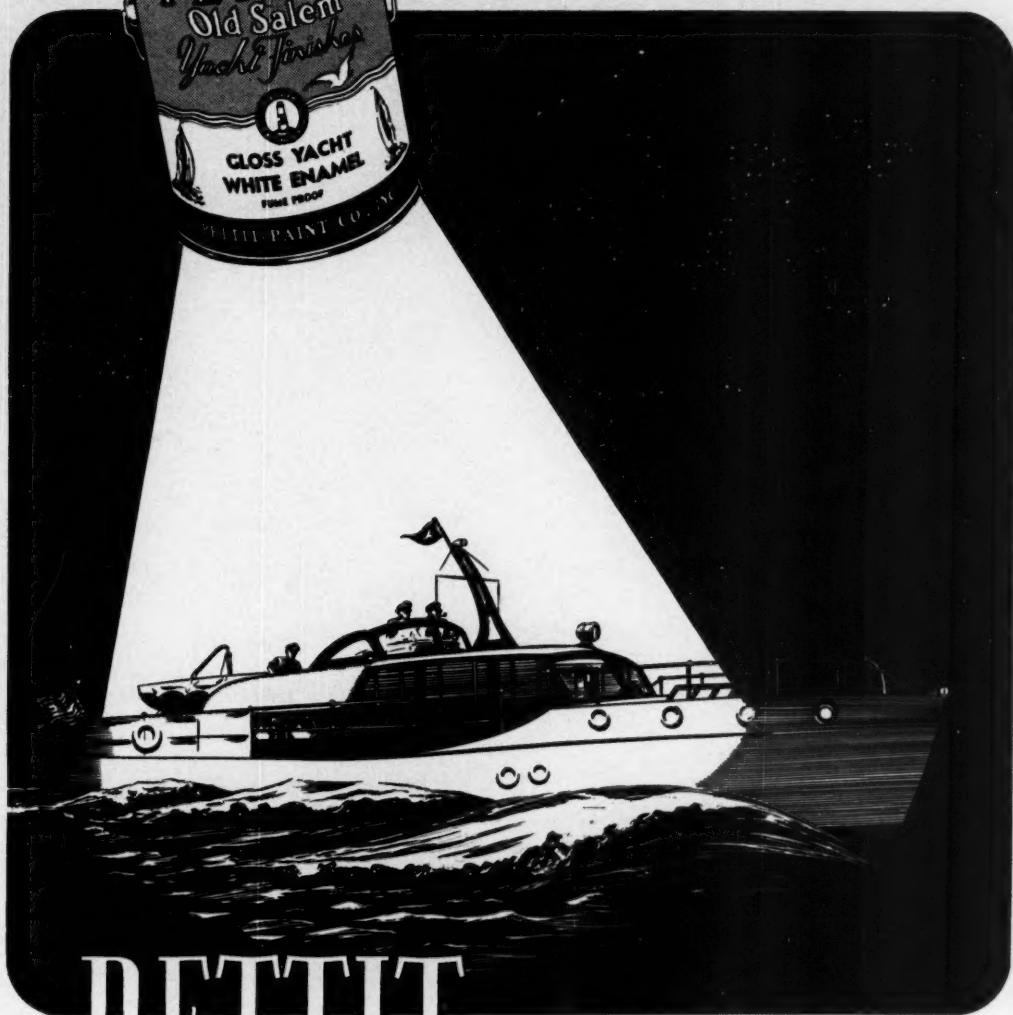
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PACIFIC COAST DISTRIBUTORS: Nordby Supply Co., Seattle, Wash., and Ketchikan, Alaska; The Beebe Co., Portland and Astoria, Oregon; Carstens Marine Supplies, Spokane, Wash.; Gray's Motor Service, Inc., Salt Lake City, Utah; B. H. Hehgen Co., Ltd., San Francisco and Los Angeles, Calif.; Harbor Marine Supply Co., Terminal Island, Calif.; Balbon Marine Hardware Co., Newport Beach, Calif.; Nuttall Styris Co., San Diego, Calif.; Outdoor Equipment Corp., Las Vegas, Nevada; Jack Bolton Marine, Denver, Colo.



Straight Steers by Skipper

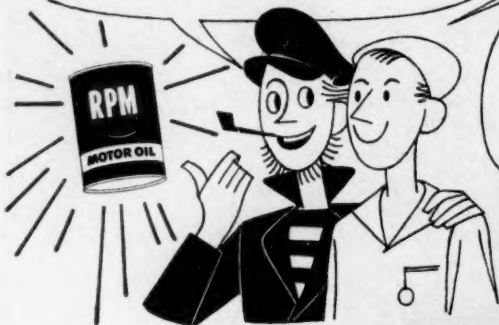
No wonder I can't get up any speed! All the power in my boat's engine has been scuttled by worn cylinders and gum-stuck rings. It's like dragging anchor all the time.

Blow me down, if your engine isn't really fouled up. Looks like carbon-particles got at it like barnacles latching onto a hull. But you've got a fine boat here, Lad—and I'll tell ye how to avoid that engine trouble. Use RPM Motor Oil.



Ye see, Mate, "RPM" contains special compounds that make all the difference. Here's oil that prevents corrosion and gum, and holds carbon particles in suspension. And when your boat's idle, there's a thin, tough film of "RPM" that stays on all parts—even for weeks. That's how it prevents start-up wear.

Flying jelly-fishes! With that kind of oil, I could get all the knots my boat was built for. Skipper, where do I get "RPM"?



Just tie up at any Standard Marine Station. There are 213 of 'em between Mexico and the Aleutians—always ready to serve you. Another thing I wanted to remind ye: a clean boat is a safer boat—so don't be keeping any grease-stained cleanin' rags aboard. And for your further safety, don't forget to check your fire extinguishers before ye shove off each time.

You know, Skipper, that makes a lot of sense—thanks for the straight steers!

**STANDARD
MARINE PRODUCTS**

STANDARD OIL COMPANY OF CALIFORNIA

CHEVRON GASOLINE STANDARD DIESEL FUELS RPM DELCO OILS RPM MOTOR OIL
RPM GREASES RPM OUTBOARD MOTOR OIL RPM OUTBOARD BEAR LUBRICANT

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